Supplement 1: Basin Model Inputs

30-015-23998	**NW Shelf**		Lat	32.6623	Long	-104.17841	Elev	1063	Yates, Millman SB State No. 1				
Layer	Top (m)	Base (m)	Thick (m)	Eroded (m)	Depo from (Ma)	Depo to (Ma)	Eroded from (Ma)	Eroded to (Ma)	Lithology	PSE	TOC (%)	Kinetic	HI
Cenozoic Uplift	-1063	-1063	0	100	116	66	60	50	Limestone (micrite)				
Triassic	-1063	-1063	0	250	237	228.6	50	35	Sandstone (clay rich)				
Hiatus	-1063	-1063	0	0	251.9	237	35	35	Sandstone (clay rich)				
Salado (Top Ochoan)	-1063	-907	156	300	259.8	251.9	35	20	Anhydrite				
Tansill (Top Guad)	-907	-761	146		265.3	259.8			Limestone (micrite)				
Seven Rivers (Top Wordian)	-761	-173	588		271.5	265.3			Limestone (micrite)				
Lwr San Andres/Cutoff (Top Roadian)	-173	49	222		272.5	271.5			Limestone (micrite)				
VicPeak/Clearfork	49	804	755		278	272.5			Limestone (micrite)				
1st Bone Spring Sand	804	1577	773		283.7	278			Siltstone (organic rich, typical)				
Wolfcamp	1577	1776	199		292	283.7			Limestone (micrite)				
Lwr Wolfcamp Unc.	1776	1836	60		298.9	292			Limestone (micrite)				
Pennsylvanian (Cisco equiv)	1836	1945	109		305.9	298.9			Limestone (micrite)				
Strawn (Desmoinian)	1945	2046	101		312.6	305.9			Limestone (micrite)				
Atoka	2046	2172	126		318.7	312.6			Sandstone (clay rich)				
Morrowan	2172	2301	129		323.2	318.7			Sandstone (clay rich)				
Chester	2301	2457	156		335.4	323.2			Limestone (micrite)				
Osagean	2457	2564	107		359	335.4			Limestone (micrite)				
Woodford (Devonian)	2564	2614	50		390	359			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Middle Devonian Hiatus	2614	2614	0		411	390			Limestone (micrite)				
Wristen/Fusselman	2614	2714	100		446	411			Limestone (micrite)				
Montoya (mid-Ashgillian)	2714	2837	123		454	446			Limestone (micrite)				
Simpson (mid-Caradocian)	2837	2987	150		465.2	454			Shale (typical)				
Ellenburger (Arenigian)	2987	3132	145		490	465.2			Limestone (micrite)				
Granite Wash (proj)	3132	3137	5		495	490			Sandstone (arkose, clay poor)				
						495							

Paleobath./Elev.			Surface Temp.			Heat Flow	
Age (Ma)	PWD		Age (Ma)	SWIT (Deg C)		Age (Ma)	HF
0	-1063		0	20		0	40
20	-800		20	21.25		495	40
35	-600		35	23.63			
50	-400		50	24.09			
66	0		66	23.97			
116	-25		116	27.2			
228.6	-100		228.6	30			
237	0		237	30			
251.9	0		251.9	26.66			
259.8	0		259.8	25.22			
265.3	0		265.3	24.95			
271.5	100		271.5	21.16			
272.5	30		272.5	23.04			
278	400		278	12.74			
283.7	200		283.7	20.5			
292	150		292	23.19			
298.9	100		298.9	24			
305.9	20		305.9	24			
312.6	0		312.6	25			
318.7	0		318.7	25			
323.2	0		323.2	25			
335.4	0		335.4	25			
359	50		359	23			
390	0		390	25			
411	0		411	25			
446	0		446	25			
454	0		454	25			
465.2	0		465.2	25			
490	0		490	25			
495	0		495	25			

42-475-30190	**Central Delaware**		Lat	31.4325	Long	-103.31606	Elev	782					
Layer	Top (m)	Base (m)	Thick (m)	Eroded (m)	Depo from (Ma)	Depo to (Ma)	Eroded from (Ma)	Eroded to (Ma)	Lithology	PSE	TOC (%)	Kinetic	HI
Cenozoic Uplift	-782	-782	0	100	116	66	60	30	Limestone (micrite)				
Triassic (Dockum Gp.)	-782	-556	226	50	237	228.6	30	20	Sandstone (clay rich)				
Rustler (Top Ochoan)	-556	708	1264		259.8	251.9			Anhydrite				
Delaware Gp (Top Guad)	708	1001	293		268	259.8			Siltstone (organic rich, typical)				
Cherry Canyon	1001	1752	751		271.5	268			Siltstone (organic rich, typical)				
Bone Spring - Cutoff (Top Roadian)	1752	2169	417		283.7	271.5			Limestone (micrite)	Source Rock	2	Lewan(2002)_TII(WoodSh)	300
Wolfcamp	2169	2784	615		296	283.7			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Lwr Wolfcamp Unc (prelim pick)	2784	3799	1015		303.5	296			Shale (typical)				
Canyon (estimated)	3799	3899	100		305.9	303.5			Shale (typical)				
Strawn (Desmoinian)	3899	3971	72		312.6	305.9			Limestone (micrite)				
Atoka (prelim pick)	3971	4018	48		318.7	312.6			Sandstone (clay rich)				
Morrowan (prelim pick)	4018	4031	13		323.2	318.7			Sandstone (clay rich)				
Barnett (Chester)	4031	4150	118		346.7	323.2			Siltstone (organic rich, typical)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Miss. Ls (Meramecian)	4150	4205	55		359	346.7			Limestone (micrite)				
Woodford (Devonian)	4205	4348	143		390	359			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Middle Devonian Unc	4348	4348	0		407.5	390			Limestone (micrite)				
Thirtyone (Pragian)	4348	4480	133		435	407.5			Limestone (micrite)				
Fusselman (in upper Llandoverian)	4480	4513	32		446	435			Limestone (micrite)				
Montoya (mid-Ashgillian)	4513	4678	166		454	446			Limestone (micrite)				
Simpson (mid-Caradocian)	4678	5214	536		465.2	454			Shale (typical)				
Ellenburger (Arenigian)	5214	5604	390		490	465.2			Limestone (micrite)				
Granite Wash (proj)	5604	5606	2		495	490			Sandstone (arkose, clay poor)				
						495							

Paleobath./Elev.			Surface Temp.			Heat Flow	
Age (Ma)	PWD		Age (Ma)	SWIT (Deg C)		Age (Ma)	HF
0	-782		0	20		0	47
20	-500		20	21.52		495	47
30	-400		30	23			
60	-100		60	24.14			
66	0		66	24.3			
116	-50		116	27.6			
228.6	-100		228.6	30			
237	-10		237	30			
251.9	0		251.9	26.53			
259.8	800		259.8	5			
268	600		268	5			
271.5	1000		271.5	5			
283.7	1000		283.7	5			
296	1000		296	5			
303.5	400		303.5	13.5			
305.9	100		305.9	22			
312.6	0		312.6	25			
318.7	0		318.7	25			
323.2	50		323.2	23			
346.7	0		346.7	25			
359	50		359	23			
390	0		390	25			
407.5	0		407.5	25			
435	0		435	25			
446	0		446	25			
454	0		454	25			
465.2	0		465.2	25			
490	0		490	25			
495	0		495	25			

30-025-21036	**North Delaware**		Lat	32.0815	Long	-103.59196	Elev	1031	Union Oil, Red Hills Unit 1				
Layer	Top (m)	Base (m)	Thick (m)	Eroded (m)	Depo from (Ma)	Depo to (Ma)	Eroded from (Ma)	Eroded to (Ma)	Lithology	PSE	TOC (%)	Kinetic	HI
Cenozoic Uplift	-1031	-995	36	150	116	66	60	20	Limestone (micrite)				
Triassic	-995	-765	230	50	237	228.6	20	0	Sandstone (clay rich)				
Rustler (Top Ochoan)	-765	460	1225		259.8	251.9			Anhydrite				
Delaware Gp (Top Guad)	460	851	391		268	259.8			Siltstone (organic rich, typical)				
Cherry/Brushy Canyon	851	1718	867		271.5	268			Siltstone (organic rich, typical)	Source Rock	2	Lewan(2002)_TII(WoodSh)	300
Bone Spring - Cutoff (Top Roadian)	1718	2518	800		283.7	271.5			Limestone (micrite)	Source Rock	2	Lewan(2002)_TII(WoodSh)	300
Wolfcamp	2518	2969	451		296	283.7			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Lwr Wolfcamp Unc (estimated)	2969	3231	262		303.5	296			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Canyon (estimated)	3231	3331	100		305.9	303.5			Shale (typical)				
Strawn (Desmoinian)	3331	3398	67		312.6	305.9			Limestone (micrite)				
Atoka	3398	3547	149		318.7	312.6			Sandstone (clay rich)				
Morrowan	3547	3728	181		323.2	318.7			Sandstone (clay rich)				
Barnett (Chester)	3728	4118	390		346.7	323.2			Siltstone (organic rich, typical)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Miss. Ls (Meramecian)	4118	4234	116		359	346.7			Limestone (micrite)				
Woodford (Devonian)	4234	4280	46		390	359			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Middle Devonian Unc	4280	4280	0		407.5	390			Limestone (micrite)				
Thirtyone (Pragian)	4280	4632	352		435	407.5			Limestone (micrite)				
Fusselman (in upper Llandoverian)	4632	4760	128		446	435			Limestone (micrite)				
Montoya (mid-Ashgillian)	4760	4884	124		454	446			Limestone (micrite)				
Simpson (mid-Caradocian)	4884	5123	239		465.2	454			Shale (typical)				
Ellenburger (Arenigian)	5123	5444	321		490	465.2			Limestone (micrite)				
Granite Wash (proj)	5444	5449	5		495	490			Sandstone (arkose, clay poor)				
						495							

Paleobath./Elev.			Surface Temp.			Heat Flow	
Age (Ma)	PWD		Age (Ma)	SWIT (Deg C)		Age (Ma)	HF
0	-1031		0	20		0	50
20	-800		20	21.38		495	50
30	-600		30	22.86			
60	-100		60	23.96			
66	0		66	24.14			
116	-50		116	27.4			
228.6	-100		228.6	30			
237	-30		237	30			
251.9	0		251.9	26.61			
259.8	800		259.8	5			
268	600		268	5			
271.5	1000		271.5	5			
283.7	1000		283.7	5			
296	1000		296	5			
303.5	400		303.5	13.5			
305.9	100		305.9	22			
312.6	0		312.6	25			
318.7	0		318.7	25			
323.2	50		323.2	23			
346.7	0		346.7	25			
359	50		359	23			
390	0		390	25			
407.5	0		407.5	25			
435	0		435	25			
446	0		446	25			
454	0		454	25			
465.2	0		465.2	25			
490	0		490	25			
495	0		495	25			

42-169-34066	**North Midland**		Lat	33.0412	Long	-101.42155	Elev	781					
Layer	Top (m)	Base (m)	Thick (m)	Eroded (m)	Depo from (Ma)	Depo to (Ma)	Eroded from (Ma)	Eroded to (Ma)	Lithology	PSE	TOC (%)	Kinetic	HI
Cenozoic Uplift	-781	-781	0	150	102	66	66	35	Sandstone (clay rich)				
Edwards	-781	-781	0	100	110	102	35	15	Limestone (micrite)				
Antlers Sandstone	-781	-781	0	40	116	110	15	5	Sandstone (clay rich)				
Triassic	-781	-631	150	10	237	228.6	5	0	Sandstone (clay rich)				
Dewey Lake	-631	-591	40		255	252			Shale (typical)				
Salado-Rustler	-591	-544	47		259.8	255			Salt				
Tansill (Top Guadalupian)	-544	-478	66		265.2	259.8			Salt				
Seven Rivers	-478	-225	253		268	265.2			Salt				
San Andres	-225	2	227		271.5	268			Dolomite (typical)				
Lwr San Andres	2	796	794		272.5	271.5			Dolomite (typical)				
Top Spraberry	796	1521	725		283.7	272.5			Sandstone (clay rich)				
Wolfcamp	1521	1660	140		303.7	283.7			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Canyon	1660	1750	90		323.2	303.7			Limestone (micrite)				
Barnett (Chester)	1750	1789	39		347	323.2			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Mississippian Ls. (top Osagean)	1789	1831	42		359	347			Limestone (micrite)				
Woodford (Devonian)	1831	1844	13		374	359			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Middle Devonian Hiatus (Hunton)	1844	1844	0	50	465.2	435	390	374	Limestone (micrite)				
Ellenburger (Arenigian)	1844	2027	183		490	465.2			Dolomite (typical)				
Bsmt	2027	2028	1		491	490			Granite (> 1000 Ma old)				
						491							

Paleobath./Elev.			Surface Temp.			Heat Flow	
Age (Ma)	PWD		Age (Ma)	SWIT (Deg C)		Age (Ma)	HF
0	-781		0	20		0	45
20	-400		20	21.25		490	45
66	-100		66	23.97			
102	0		102	27.43			
110	-30		110	27.33			
116	-50		116	27.2			
228.6	-50		228.6	30			
237	0		237	30			
252	0		252	26.64			
255	0		255	25.98			
259.8	0		259.8	25.22			
265.2	0		265.2	24.97			
268	0		268	24.61			
271.5	0		271.5	24.16			
272.5	500		272.5	9.01			
283.7	500		283.7	8.87			
303.7	100		303.7	22			
323.2	0		323.2	25			
347	0		347	25			
359	0		359	25			
374	0		374	25			
390	0		390	25			
435	0		435	25			
465.2	0		465.2	25			
490	0		490	25			

42-135-39370	**Central Midland**		Lat	31.9542	Long	-102.36519	Elev	919					
Layer	Top (m)	Base (m)	Thick (m)	Eroded (m)	Depo from (Ma)	Depo to (Ma)	Eroded from (Ma)	Eroded to (Ma)	Lithology	PSE	TOC (%)	Kinetic	HI
Cenozoic Uplift	-919	-919	0	300	102	66	66	20	Sandstone (clay rich)				
Edwards	-919	-899	20	100	110	102	20	0	Limestone (micrite)				
Antlers Sandstone	-899	-839	61		116	110			Sandstone (clay rich)				
Jurassic Hiatus	-839	-839	0	50	228.6	202	202	116	Sandstone (clay rich)				
Triassic	-839	-405	433		237	228.6			Sandstone (clay rich)				
Dewey Lake	-405	-343	62		255	252			Shale (typical)				
Salado-Rustler	-343	153	496		259.8	255			Salt				
Tansill (Top Guadalupian)	153	442	289		265.2	259.8			Dolomite (typical)				
Seven Rivers	442	1159	717		268	265.2			Dolomite (typical)				
San Andres sandstone/Brushy Canyon	1159	1272	112		271.5	268			Sandstone (clay rich)				
Lwr San Andres	1272	1388	116		272.5	271.5			Sandstone (clay rich)				
Top Spraberry	1388	1870	482		283.7	272.5			Limestone (shaly)				
Wolfcamp	1870	2031	162		296	283.7			Shale (organic rich, 3% TOC)				
Lower Wolfcamp	2031	2116	84		303.7	296			Shale (typical)				
Canyon (Missourian)	2116	2286	170		306	303.7			Sandstone (clay rich)				
Strawn (Desmoinian)	2286	2342	56		312.4	306			Limestone (micrite)				
Atoka	2342	2513	171		323.2	312.4			Shale (typical)				
Barnett (Chester)	2513	2568	55		347	323.2			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Mississippian Ls. (top Osagean)	2568	2616	48		359	347			Limestone (micrite)				
Woodford (Devonian)	2616	2645	29		374	359			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Middle Devonian Hiatus (Hunton)	2645	2828	183	20	411	390	390	374	Limestone (micrite)				
Wristen (top Lochkovian)	2828	2952	124		435	411			Marl				
Fusselman (in upper Llandoverian)	2952	2989	36		446	435			Limestone (micrite)				
Montoya (mid-Ashgillian)	2989	3055	67		454	446			Limestone (micrite)				
Simpson (mid-Caradocian)	3055	3192	137		465.2	454			Siltstone (organic lean)				
Ellenburger (Arenigian)	3192	3375	183		490	465.2			Dolomite (typical)				
Bsmt	3375	3376	1		491	490			Granite (> 1000 Ma old)				
						491							

Paleobath./Elev.			Surface Temp.			Heat Flow	
Age (Ma)	PWD		Age (Ma)	SWIT (Deg C)		Age (Ma)	HF
0	-919		0	20		0	45
20	-700		20	21.38		495	45
66	-50		66	24.14			
100	0		100	27.55			
102	0		102	27.64			
110	-50		110	27.53			
116	-50		116	27.4			
202	-100		202	25.33			
228.6	-200		228.6	30			
237	0		237	30			
252	0		252	26.58			
255	0		255	25.92			
259.8	0		259.8	25.15			
265.2	100		265.2	21.81			
268	500		268	9.11			
271.5	500		271.5	9.01			
272.5	500		272.5	8.98			
283.7	400		283.7	12.69			
296	400		296	13.31			
303.7	200		303.7	22			
306	0		306	25			
312.4	0		312.4	25			
323.2	50		323.2	23			
347	10		347	24			
359	50		359	23			
374	0		374	25			
390	0		390	25			
411	0		411	25			
435	0		435	25			
446	0		446	25			
454	0		454	25			
465.2	0		465.2	25			
490	0		490	25			

42-465-30786	**Val Verde**		Lat	30.2763	Long	-101.44012	Elev	677					
Layer	Top (m)	Base (m)	Thick (m)	Eroded (m)	Depo from (Ma)	Depo to (Ma)	Eroded from (Ma)	Eroded to (Ma)	Lithology	PSE	TOC (%)	Kinetic	HI
Cenozoic Uplift	-677	-677	0	200	102	66	66	20	Sandstone (clay rich)				
Edwards	-677	-345	332	100	110	102	20	0	Limestone (micrite)				
Jurassic Hiatus	-345	-345	0	25	228.6	202	202	200.8	Sandstone (clay rich)				
Triassic	-345	-345	0	100	252	228.6	200.8	196.2	Sandstone (clay rich)				
Permian	-345	-345	0	200	259.8	252	196.2	187	Shale (typical)				
Guadalupian	-345	-345	0	709	272.3	259.8	187	162.9	Dolomite (typical)				
Leonard	-345	-345	0	579	283.7	272.3	162.9	143.1	Shale (typical)				
Wolfcamp	-345	-28	317	20	286	283.7	143.1	116	Shale (typical)				
Ozona	-28	1157	1185		292	286			Shale (typical)				
Sonora	1157	2857	1700		298.9	292			Shale (typical)				
Pennsylvanian	2857	3050	193		305.9	298.9			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Strawn	3050	3081	31		323.2	305.9			Limestone (micrite)				
Barnett	3081	3135	54		359	323.2			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Woodford	3135	3167	32		390	359			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Devonian Chert (Caballos)	3167	3297	130		411	390			Chert				
Wristen	3297	3372	75		446	411			Marl				
Montoya	3372	3442	70		454	446			Limestone (micrite)				
Simpson	3442	3617	175		465.2	454			Siltstone (organic lean)				
Ellenburger	3617	4074	457		490	465.2			Dolomite (typical)				
Wilburns	4074	4104	30		495	490			Sandstone (clay rich)				
Bsmt	4104	4105	1		496	495			Granite (> 1000 Ma old)				
						496							

Paleobath./Elev.			Surface Temp.			Heat Flow	
Age (Ma)	PWD		Age (Ma)	SWIT (Deg C)		Age (Ma)	HF
0	-677		0	20.24		0	50
20	-400		20	21.66		495	50
66	-100		66	24.45			
102	0		102	28.07			
110	-25		110	27.95			
116	-25		116	27.8			
202	-50		202	25.54			
228.6	-100		228.6	30			
252	0		252	26.42			
259.8	0		259.8	25			
272.3	0		272.3	23.64			
283.7	0		283.7	23.1			
286	150		286	20.23			
292	370		292	14.01			
298.9	200		298.9	21.48			
305.9	50		305.9	23			
323.2	50		323.2	23			
359	100		359	22			
390	150		390	22			
411	100		411	22			
446	0		446	25			
454	0		454	25			
465.2	0		465.2	25			
490	0		490	25			
495	0		495	25			

30-025-10186	**North CBP**		Lat	32.4007	Long	-103.15285	Elev	1041					
Layer	Top (m)	Base (m)	Thick (m)	Eroded (m)	Depo from (Ma)	Depo to (Ma)	Eroded from (Ma)	Eroded to (Ma)	Lithology	PSE	TOC (%)	Kinetic	HI
Surface	-1041	-1041	0	100	116	66	66	20	Sandstone (clay rich)				
Triassic	-1041	-895	146		237	228.6			Sandstone (clay rich)				
Dewey Lake (Top Permian)	-895	-303	592		259.8	251.9			Anhydrite				
Tansill (Top Guad)	-303	-194	109		265.3	259.8			Dolomite (typical)				
Seven Rivers (Top Wordian)	-194	227	421		271.5	265.3			Dolomite (typical)				
Lwr San Andres/Cutoff (Top Roadian)	227	495	268		273	271.5			Dolomite (typical)				
Glorieta (upper Leonardian)	495	1138	643		283.7	273			Dolomite (typical)				
Wolfcamp	1138	1178	40		292	283.7			Dolomite (typical)				
Canyon (Missourian)	1178	1178	0	6	305.9	303.8	303.8	303.75	Marl				
Strawn (Desmoinian)	1178	1178	0	62	312.6	305.9	303.75	303.25	Limestone (micrite)				
Atoka	1178	1178	0	142	323.2	312.6	303.25	302.1	Limestone (micrite)				
Barnett (Chester)	1178	1178	0	114	359	323.2	302.1	301.17	Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Woodford (Devonian)	1178	1178	0	59	374	359	301.17	300.69	Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Middle Devonian Hiatus	1178	1178	0	0	407.5	390	300.69	300.69	Limestone (micrite)				
Thirtyone (Pragian)	1178	1178	0	174	435	407.5	300.69	299.28	Limestone (micrite)				
Fusselman (in upper Llandoverian)	1178	1178	0	168	446	435	299.28	297.92	Limestone (micrite)				
Montoya (mid-Ashgillian)	1178	1178	0	192	454	446	297.92	296.36	Limestone (micrite)				
Simpson (mid-Caradocian)	1178	1178	0	233	465.2	454	296.36	294.47	Shale (typical)				
Ellenburger (Arenigian)	1178	1178	0	305	490	465.2	294.47	292	Limestone (micrite)				
Granite Wash	1178	1188	10		495	490			Sandstone (arkose, clay poor)				
						495							

Paleobath./Elev.			Surface Temp.			Heat Flow	
Age (Ma)	PWD		Age (Ma)	SWIT (Deg C)		Age (Ma)	HF
0	-1041		0	20		0	45
20	-700		20	21.38		495	45
66	0		66	24.14			
116	-50		116	27.4			
228.6	-100		228.6	30			
237	-30		237	30			
259.8	0		259.8	25.15			
265.3	0		265.3	24.8			
271.5	0		271.5	24.02			
273	0		273	23.86			
283.7	0		283.7	23.38			
292	0		292	24.03			
303.5	0		303.5	25			
305.9	0		305.9	25			
312.6	0		312.6	25			
323.2	50		323.2	23			
359	50		359	23			
374	0		374	25			
390	0		390	25			
407.5	0		407.5	25			
435	0		435	25			
446	0		446	25			
454	0		454	25			
465.2	0		465.2	25			
490	0		490	25			
495	0		495	25			

30-025-12451	**Central CBP**		Lat	32.0557	Long	-103.10618	Elev	919					
Layer	Top (m)	Base (m)	Thick (m)	Eroded (m)	Depo from (Ma)	Depo to (Ma)	Eroded from (Ma)	Eroded to (Ma)	Lithology	PSE	TOC (%)	Kinetic	HI
Surface	-919	-919	0		20	0			Sandstone (clay rich)				
Cretaceous	-919	-919	0	200	116	66	66	30	Limestone (micrite)				
Triassic	-919	-739	180	50	237	228.6	30	20	Sandstone (clay rich)				
Dewey Lake (Top Permian)	-739	-145	594		259.8	251.9			Anhydrite				
Tansill (Top Guad)	-145	-33	112		265.3	259.8			Dolomite (typical)				
Seven Rivers (Top Wordian)	-33	463	496		271.5	265.3			Dolomite (typical)				
Lwr San Andres/Cutoff (Top Roadian)	463	675	212		272	271.5			Dolomite (typical)				
Glorieta (upper Leonardian)	675	1318	643		283.7	272			Dolomite (typical)				
Wolfcamp	1318	1531	213		292	283.7			Limestone (shaly)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Lwr Wolfcamp Unc.	1531	1632	101	30	303.5	296	296	292	Limestone (micrite)				
Canyon (Missourian)	1632	1644	12		305.9	303.5			Marl				
Strawn (Desmoinian)	1644	1768	124		312.6	305.9			Limestone (micrite)				
Atoka	1768	1910	142		323.2	312.6			Limestone (micrite)				
Barnett (Chester)	1910	2024	114		359	323.2			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Woodford (Devonian)	2024	2083	59		374	359			Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Middle Devonian Hiatus	2083	2083	0	20	407.5	390	390	374	Limestone (micrite)				
Thirtyone (Pragian)	2083	2257	174		435	407.5			Limestone (micrite)				
Fusselman (in upper Llandoverian)	2257	2425	168		446	435			Limestone (micrite)				
Montoya (mid-Ashgillian)	2425	2617	192		454	446			Limestone (micrite)				
Simpson (mid-Caradocian)	2617	2850	233		465.2	454			Shale (typical)				
Ellenburger (Arenigian)	2850	3145	295		490	465.2			Limestone (micrite)				
Granite Wash	3145	3150	5		495	490			Sandstone (arkose, clay poor)				
						495							

Paleobath./Elev.			Surface Temp.			Heat Flow	
Age (Ma)	PWD		Age (Ma)	SWIT (Deg C)		Age (Ma)	HF
0	-919		0	20		0	55
20	-700		20	21.38		495	55
66	0		66	24.14			
116	-50		116	27.4			
228.6	-100		228.6	30			
237	-30		237	30			
251.9	0		251.9	26.61			
259.8	0		259.8	25.15			
265.3	0		265.3	24.8			
271.5	0		271.5	24.02			
272.5	0		272.5	23.91			
283.7	30		283.7	22.38			
292	0		292	24.03			
296	0		296	24.62			
303.5	0		303.5	25			
305.9	0		305.9	25			
312.6	0		312.6	25			
323.2	50		323.2	23			
359	50		359	23			
374	0		374	25			
390	0		390	25			
407.5	0		407.5	25			
435	0		435	25			
446	50		446	23			
454	0		454	25			
465.2	0		465.2	25			
490	0		490	25			
495	0		495	25			

30-103-36614	**South CBP**		Lat	31.5258	Long	-102.68948	Elev	814					
Layer	Top (m)	Base (m)	Thick (m)	Eroded (m)	Depo from (Ma)	Depo to (Ma)	Eroded from (Ma)	Eroded to (Ma)	Lithology	PSE	TOC (%)	Kinetic	HI
Cretaceous	-814	-720	94	100	228.6	66	66	20	Limestone (micrite)				
Triassic	-720	-509	211		251.9	228.6			Sandstone (clay rich)				
Rustler (Top Permian)	-509	-370	139		259.8	251.9			Anhydrite				
Tansill (Top Guad)	-370	-235	135		265.3	259.8			Dolomite (typical)				
Seven Rivers (Top Wordian)	-235	76	311		268	265.3			Dolomite (typical)				
San Andres	76	336	260		272	268			Dolomite (typical)				
Glorieta (upper Leonardian)	336	956	620		283.7	272			Dolomite (typical)				
Wolfcamp	956	1024	68		296	283.7			Limestone (shaly)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Canyon (Missourian)	1024	1024	0	12	305.9	303.8	303.8	303.62	Marl				
Strawn (Desmoinian)	1024	1024	0	124	312.6	305.9	303.62	301.78	Limestone (micrite)				
Atoka	1024	1024	0	142	323.2	312.6	301.78	299.66	Limestone (micrite)				
Barnett (Chester)	1024	1024	0	114	359	323.2	299.66	297.97	Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Woodford (Devonian)	1024	1024	0	59	390	359	297.97	297.09	Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Middle Devonian Hiatus	1024	1024	0	0	407.5	390	297.09	297.09	Limestone (micrite)				
Thirtyone (Pragian)	1024	1024	0	174	435	407.5	297.09	294.5	Limestone (micrite)				
Fusselman (in upper Llandoverian)	1024	1024	0	168	446	435	294.5	292	Limestone (micrite)				
Montoya (mid-Ashgillian)	1024	1173	149		454	446			Limestone (micrite)				
Simpson (projected)	1173	1329	156		465.2	454			Shale (typical)				
Ellenburger (projected)	1329	1457	128		490	465.2			Limestone (micrite)				
Granite Wash (projected)	1457	1467	10		495	490			Sandstone (arkose, clay poor)				
Basement (Projected)	1467	1468	1		495.1	495			Granite (> 1000 Ma old)				
						495.1							

Paleobath./Elev.			Surface Temp.			Heat Flow	
Age (Ma)	PWD		Age (Ma)	SWIT (Deg C)		Age (Ma)	HF
0	-814		0	20		0	45
20	-700		20	21.52		495	45
66	0		66	24.3			
116	-50		116	27.6			
228.6	-100		228.6	30			
237	-30		237	30			
251.9	0		251.9	26.53			
259.8	0		259.8	25.03			
265.3	0		265.3	24.66			
271.5	0		271.5	23.88			
272.5	0		272.5	23.77			
283.7	30		283.7	22.25			
292	0		292	23.85			
296	0		296	24.43			
303.5	0		303.5	25			
305.9	0		305.9	25			
312.6	0		312.6	25			
323.2	50		323.2	23			
359	50		359	23			
374	0		374	25			
390	0		390	25			
407.5	0		407.5	25			
435	0		435	25			
446	50		446	23			
454	0		454	25			
465.2	0		465.2	25			
490	0		490	25			
495	0		495	25			

42-235-30663	**Eastern Shelf**		Lat	31.1625	Long	-100.79167	Elev	713					
Layer	Top (m)	Base (m)	Thick (m)	Eroded (m)	Depo from (Ma)	Depo to (Ma)	Eroded from (Ma)	Eroded to (Ma)	Lithology	PSE	TOC (%)	Kinetic	HI
Cenozoic Uplift	-713	-713	0	300	102	66	66	20	Sandstone (clay rich)				
Edwards	-713	-439	274		110	102			Limestone (micrite)				
Antlers Sandstone	-439	-334	105		116	110			Sandstone (clay rich)				
Dockum (restored)	-334	-334	0	50	237	228.6	202	170	Sandstone (clay rich)				
Dewey Lake-Rustler (restored	-334	-334	0	200	259.8	251.9	170	140	Sandstone (clay rich)				
San Angelo (Top Guadalupian)	-334	-245	89	300	273	259.8	140	116	Limestone (micrite)				
Clear Fork (Top Leonardian)	-245	560	805		281	273			Limestone (micrite)				
Wichita-Albany (lower Leonard)	560	907	347		283.7	281			Limestone (shaly)				
Wolfcamp	907	1024	117		292	283.7			Shale (organic rich, 3% TOC)	Source Rock	3	Burnham(1989)_TII	300
Lower Wolfcamp	1024	1192	168		303.5	292			Shale (typical)				
Missourian Sandstone	1192	1509	317		305.9	303.5			Sandstone (clay rich)				
Strawn	1509	1546	37		323.3	305.9			Limestone (micrite)				
Top Mississippian Hiatus	1546	1546	0	25	374	331	331	323.3	Limestone (micrite)				
Middle Devonian Hiatus	1546	1546	0	25	465.2	407.5	390	374	Limestone (micrite)				
Ellenburger	1546	1699	153		495	465.2			Limestone (micrite)				
Bsmt	1699	1700	1		496	495			Granite (> 1000 Ma old)				
						496							

Paleobath./Elev.			Surface Temp.			Heat Flow	
Age (Ma)	PWD		Age (Ma)	SWIT (Deg C)		Age (Ma)	HF
0	-713		0	20		0	45
20	-400		20	21.52		495	45
66	0		66	24.3			
102	0		102	27.85			
110	-50		110	27.74			
116	-50		116	27.6			
140	-50		140	26.38			
170	-50		170	25			
202	-100		202	25.44			
228.6	-100		228.6	30			
237	-50		237	30			
259.8	-30		259.8	25.03			
273	0		273	23.72			
281	100		281	20.18			
283.7	200		283.7	20.25			
292	300		292	16.89			
303.5	200		303.5	22			
305.9	0		305.9	25			
323.3	0		323.3	25			
374	0		374	25			
465.2	0		465.2	25			
495	0		495	25			

30-035-00017	**Huapache-Pedernal**		Lat	32.32	Long	-105.0023	Elev	1386					
Layer	Top (m)	Base (m)	Thick (m)	Eroded (m)	Depo from (Ma)	Depo to (Ma)	Eroded from (Ma)	Eroded to (Ma)	Lithology	PSE	TOC (%)	Kinetic	HI
Cretaceous	-1386	-1386	0	100	100.5	66	66	44	Sandstone (clay rich)				
Dakota	-1386	-1386	0	10	107	100.5	44	40	Sandstone (clay rich)				
Chinle (Triassic)	-1386	-1386	0	30	237	201.4	40	33	Sandstone (clay rich)				
Salado (restored)	-1386	-1386	0	100	259.8	251.9	33	22	Anhydrite				
Artesia Gp. (restored)	-1386	-1386	0	150	268.6	259.8	22	0	Limestone (shaly)				
San Andres	-1386	-1095	291		274	268.6			Limestone (micrite)				
Yeso	-1095	-796	299		280	274			Limestone (shaly)				
Tubb/Lwr Clearfork	-796	-649	147		284	280			Limestone (shaly)				
Abo	-649	-524	125		290	284			Shale (organic lean, sandy)				
PowWow	-524	-463	61		292	290			Sandstone (clay rich)				
Upper Penn	-463	-463	0	20	306	303.8	303.8	302	Limestone (shaly)				
Desmoinesian	-463	-463	0	50	312.7	306	302	300.5	Limestone (shaly)				
Atokan-Morrowan	-463	-463	0	100	323.3	312.7	300.5	296.5	Limestone (shaly)				
Mississippian	-463	-463	0	150	359	323.3	296.5	292.5	Limestone (micrite)				
Woodford	-463	-463	0	30	372.2	359	292.5	292	Shale (organic rich, 3% TOC)	Source Rock	3	Lewan(2002)_TII(WoodSh)	300
Fusselman	-463	-345	118		447.5	431			Dolomite (typical)				
Montoya	-345	-256	89		467	447.5			Dolomite (typical)				
El Paso	-256	-106	150		477	467			Dolomite (typical)				
Bliss (proj)	-106	-91	15		485.3	477			Sandstone (typical)				
Bsmt (proj)	-91	-91	0		486	485.3			Granite (> 1000 Ma old)				
						486							

Paleobath./Elev.			Surface Temp.			Heat Flow	
Age (Ma)	PWD		Age (Ma)	SWIT (Deg C)		Age (Ma)	HF
0	-1386		0	20		0	55
50	-400		50	24.35		486	55
66	-200		66	24.14			
100.5	-100		100.5	27.58			
107	-50		107	27.54			
180	-40		180	24.83			
201.4	-30		201.4	25.3			
237	-20		237	30			
242	-10		242	30			
251.9	-10		251.9	26.61			
259.8	0		259.8	25.15			
268.6	0		268.6	24.38			
274	0		274	23.75			
280	0		280	23.31			
284	0		284	23.39			
292	0		292	24.03			
302	0		302	25			
303.8	0		303.8	25			
306	0		306	25			
312.7	0		312.7	25			
323.3	0		323.3	25			
359	50		359	23			
431	0		431	25			
447.5	0		447.5	25			
467	0		467	25			
477	0		477	25			
486	0		486	25			

Supplement 2:
Lower Wolfcamp Unconformity Subcrop Data

Note: This data includes a few extra data points that are consistent with the subcrop map (Figure 2), but are not posted as control points.

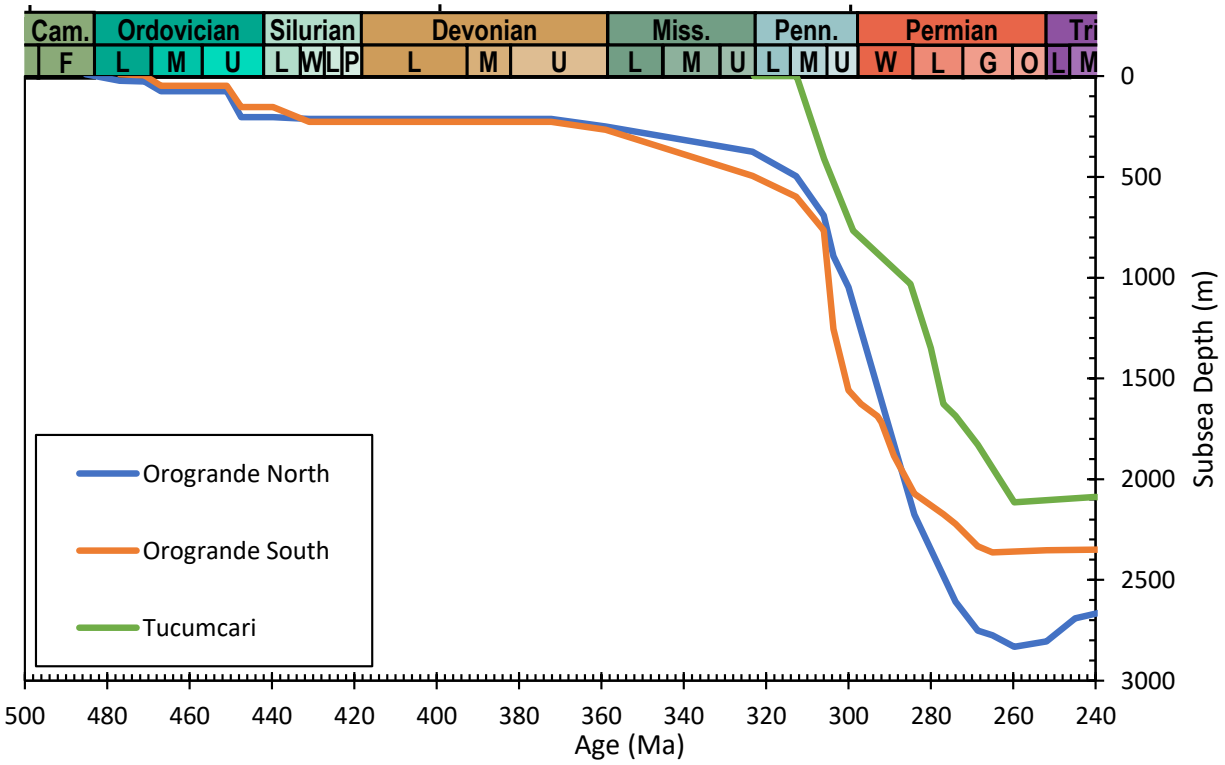
Site	Latitude	Longitude	Area	Subcrop Interval	Stratigraphy	Source
Gomez Field	30.9182	-102.7118	CBP	Miss	Wolfcamp on Barnett	Fick (2018) HGS Talk
Apco Ellenburger	31.102	-102.589	CBP	Ord	Wolfcamp on Montoya?	Dutton, 1984 Play Maps
30-103-36614	31.525799	-102.689476	CBP	Ord	Wolfcamp on Montoya	Logs/Tops
WTGS1984: No. 40	31.8163	-103.0848	CBP	Miss	Wolfcamp on Miss Lime (Osage)	WTGS 1984 Xsect
WTGS1984: No. 44	31.8498	-102.8502	CBP	Miss	Wolfcamp on Chester	WTGS 1984 Xsect
WTGS1984: No. 41	31.8548	-103.0198	CBP	U Penn-Lwr Wlfcmp	Wolfcamp on Cisco	WTGS 1984 Xsect
WTGS1984: No 48	31.86	-102.7007	CBP	Dev	Wolfcamp on Hunton	WTGS 1984 Xsect
30-025-12451	32.055727	-103.106178	CBP	U Penn-Lwr Wlfcmp	Wolfcamp on Cisco	Logs/Tops
30-025-10186	32.400741	-103.152846	CBP	Bsmt	Leonard on Bsmt	Logs/Tops
WTGS1963: No. 12	31.1277	-103.1649	Delaware	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	WTGS 1963 Xsect
WTGS1963: No. 10	31.379	-103.6152	Delaware	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	WTGS 1963 Xsect
42-475-30190	31.432494	-103.316064	Delaware	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs/Tops
WTGS1984: No. 35	31.8408	-103.3163	Delaware	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	WTGS 1984 Xsect
WTGS1984: No. 20	31.8669	-104.5361	Delaware	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	WTGS 1984 Xsect
42-229-30274	31.9717	-105.822	Delaware	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs/Tops
30-025-21036	32.081469	-103.591958	Delaware	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs/Tops
WTGS1963: No. 6	32.3521	-103.9227	Delaware	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	WTGS 1963 Xsect
WTGS1984: No. 10	31.7298	-105.6858	Diablo	Lwr Penn	Pow Wow on Strawn	WTGS 1984 Xsect
42-229-30258	31.763265	-105.017619	Diablo	U Penn-Lwr Wlfcmp	Wolfcamp on Lwr Wolfcamp or Cisco	Logs/Tops
Pow Wow Canyon	31.835097	-105.99216	Diablo	Lwr Penn	Pow Wow on Magdalena	Outcrop
42-229-30623/30624	31.891107	-105.6777779	Diablo	U Penn-Lwr Wlfcmp	Wolfcamp on Lwr Wolfcamp or Cisco	Logs
42-235-30663	31.162529	-100.791673	E Shelf	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs/Tops
Hale Cty - 1	33.9812	-102.0854	Matador	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	BEG 1981 Panhandle Xsect F-F'
WTGS1953: No. 20	31.441	-101.8552	Midland	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	WTGS 1953 Xsect
WTGS1984: No. 56	31.9195	-102.2917	Midland	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	WTGS 1984 Xsect
42-135-39370	31.954151	-102.365187	Midland	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs/Tops
WTGS1984: No. 66	32.0864	-101.6363	Midland	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	WTGS 1984 Xsect
WTGS1953: No. 29	32.3983	-102.2139	Midland	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	WTGS 1953 Xsect
42-169-34066	33.041212	-101.421552	Midland	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs/Tops
Hockley Cty - 4	33.3854	-102.1633	Midland	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	BEG 1981 Panhandle Xsect F-F'
42-229-30263	31.893598	-105.669551	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs
30-015-20176	32.029	-104.798	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Wolfcamp on Cisco	Tops (limited)
30-035-00032	32.0454	-105.8601	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Pow Wow on Penn	King and Harder (1985)
30-035-20028	32.0467	-105.6828	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Pow Wow on "Penn Shale"	Logs/Tops
30-015-23355	32.0551	-104.6181	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs/Tops
30-035-00029	32.0667	-105.3282	NW Shelf-Huapache	Bsmt	Red beds on granite	Sample description

Site	Latitude	Longitude	Area	Subcrop Interval	Stratigraphy	Source
30-035-20021	32.0812	-105.1181	NW Shelf-Huapache	Miss	Pow Wow on Miss. Ls	Logs
30-015-22547	32.0825	-104.7458	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Wolfcamp on Cisco	Data Source
30-035-20002	32.0846	-105.0361	NW Shelf-Huapache	Miss	Pow Wow on Barnett	King and Harder (1985)
30-035-00027	32.0885	-105.2642	NW Shelf-Huapache	Ord	Hueco on Montoya	King and Harder (1985)
30-035-20019	32.0958	-105.2165	NW Shelf-Huapache	Ord.	Pow Wow on Montoya	Logs/Tops; King and Harder (1985)
30-015-21378	32.1764	-104.7392	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Wolfcamp on Cisco	Logs/Tops
30-015-21378	32.1764	-104.7392	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Wolfcamp on Lwr Wolfcamp or Cisco	Logs/Tops
30-015-23317	32.2186	-104.4398	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs
30-015-21236	32.2316	-104.6286	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Tops
30-015-21133	32.2354	-104.5773	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs/Tops
30-015-10280	32.2405	-104.4239	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs/Tops
30-015-00014	32.2628	-104.6814	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Wolfcamp on Lwr Wolfcamp or Cisco	Logs/Tops
30-035-00016	32.2843	-105.1353	NW Shelf-Huapache	Bsmt	Pow Wow on Bsmt	King and Harder (1985)
30-015-00013	32.2914	-104.6756	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Abo on Canyon or younger	Logs/Tops
30-015-00013	32.2914	-104.6756	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Upr Wolfcamp on Lwr Wolfcamp	Logs/tops
30-035-00018	32.3014	-104.9937	NW Shelf-Huapache	Miss	Pow Wow on Rancheria (Osage)	King and Harder (1985), Logs/Tops
30-035-20030	32.3022	-104.8757	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Wolfcamp on Lwr Wolfcamp or Cisco	Logs/Tops
30-035-00015	32.3116	-105.3407	NW Shelf-Huapache	Miss	Pow Wow on Rancheria (Osage)	King and Harder (1985)
30-035-00017	32.32	-105.0023	NW Shelf-Huapache	Sil	Pow Wow on Fusselman	Logs
30-035-00014	32.3252	-105.453	NW Shelf-Huapache	Bsmt	Pow Wow on Bsmt	King and Harder (1985), Logs
30-035-00012	32.3577	-105.5595	NW Shelf-Huapache	Miss	Pow Wow on Rancheria (Osage)	King and Harder (1985)
30-015-10551	32.3747	-104.4495	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs
30-015-00070	32.381	-104.4726	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs
30-015-20505	32.4056	-104.4115	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs/Tops
30-015-00004	32.4143	-104.8203	NW Shelf-Huapache	Miss	Wolfcamp on Miss	Meyer (1966)
30-015-22149	32.4255	-104.7553	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Wolfcamp on Lwr Wolfcamp or Cisco	Logs/Tops
30-035-00008	32.4703	-105.2994	NW Shelf-Huapache	Ord	Abo on Montoya or El Paso	Logs/Tops
30-035-00009	32.4777	-105.1337	NW Shelf-Huapache	Miss	Wolfcamp on Miss	Meyer (1966)
30-035-00016	32.5055	-104.8756	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Abo on Canyon or younger	Logs/Tops
30-015-21939	32.5644	-104.0951	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs/Tops
30-015-21939	32.5644	-104.0951	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs/Tops
30-005-10431	32.655	-104.9259	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Uncertain	Logs/Tops
30-015-23998	32.662271	-104.178406	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Wolfcamp on Upper Penn	Logs/Tops
30-015-21150	32.788	-104.802	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Tops
WTGS1963: No. 1	33.3935	-103.7487	NW Shelf-Huapache	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	WTGS 1963 Xsect
30-035-00003	32.5744	-106.015	Orogrande	U Penn-Lwr Wlfcmp	Wolfcamp on Upper Penn	King and Harder (1985)
30-035-20001	32.75787	-106.1176529	Orogrande	U Penn-Lwr Wlfcmp	Wolfcamp on Upper Penn	King and Harder (1985)
30-035-20015	33.2944	-106.0745	Orogrande	Faulted	Yeso on Bsmt	King and Harder (1985)

Site	Latitude	Longitude	Area	Subcrop Interval	Stratigraphy	Source
30-035-20010	33.294518	-106.04422	Orogrande	U Penn-Lwr Wlfcmp	Wolfcamp on Upper Penn	Logs/Tops
B-B' (Not in NMOCD)	33.30338	-106.00034	Orogrande	U Penn-Lwr Wlfcmp	Wolfcamp on Upper Penn	King and Harder (1985)
30-027-00001	33.7453	-106.0146	Orogrande	U Penn-Lwr Wlfcmp	Wolfcamp on Upper Penn	King and Harder (1985)
WTGS1953: No. 10	30.8153	-101.4991	Ozona	Ord	Wolfcamp on Ellenburger	WTGS 1953 Xsect
WTGS1953: No. 13	30.9621	-101.6852	Ozona	Ord	Wolfcamp on Ellenburger	WTGS 1953 Xsect
30-035-00006	32.5642	-105.4887	Pedernal	U Penn-Lwr Wlfcmp	Hueco/Bursum on Upper Penn	Tops
30-005-10075	32.6261	-105.1129	Pedernal	U Penn-Lwr Wlfcmp	Uncertain	Logs/Tops
30-035-20022	32.7011	-105.4769	Pedernal	U Penn-Lwr Wlfcmp	Uncertain	Logs/Tops
30-035-20024	32.7413	-105.3976	Pedernal	U Penn-Lwr Wlfcmp	Wolfcamp on Upper Penn	Logs/Tops
30-005-10521	32.93	-105.1247	Pedernal	U Penn-Lwr Wlfcmp	Abo on Penn	Logs/Tops
30-005-00003	32.9515	-105.2989	Pedernal	Bsmt	Abo on Bsmt.	Tops
30-027-00017	33.291	-105.1591	Pedernal	Bsmt	Abo on Basement Wash	Tops
30-005-61071	33.3484	-104.634	Pedernal	Bsmt	Abo on Basement Wash	Tops
30-027-20019	33.3819	-105.0692	Pedernal	Bsmt	Abo on Basement	Logs/Tops
30-027-20010	33.4097	-105.0097	Pedernal	U Penn-Lwr Wlfcmp	Abo on Penn	Tops
30-027-20029	33.4591	-105.4546	Pedernal	Bsmt	Abo on Bsmt.	Logs/Tops
30-005-10407	33.4659	-104.1448	Pedernal	Miss	Wolfcamp on Mississippian	Tops
30-027-00018	33.5464	-104.9163	Pedernal	Bsmt	Wolfcamp on Bsmt.	Meyer (1966)
30-005-01213	33.6001	-103.6649	Pedernal	U Penn-Lwr Wlfcmp	Wolfcamp on Upper Penn	Tops
30-027-20006	33.667	-104.9069	Pedernal	Bsmt	Abo on Bsmt	Tops
30-005-62844	33.7773	-104.8345	Pedernal	Bsmt	Abo on Bsmt	Logs/Tops
30-005-62540	33.8458	-104.5012	Pedernal	Bsmt	Wolfcamp on Basement	Logs/Tops
30-005-60722	33.8865	-103.9185	Pedernal	Miss	Wolfcamp on Miss	Logs/Tops
30-005-60801	33.9308	-104.2412	Pedernal	U Penn-Lwr Wlfcmp	Wolfcamp on Cisco	Logs/Tops
30-005-60801	33.9308	-104.2412	Pedernal	U Penn-Lwr Wlfcmp	Wolfcamp on Cisco	Logs/Tops
30-027-20027	33.9349	-105.4281	Pedernal	Bsmt	Abo on Bsmt.	Logs/Tops
30-027-20040	33.9752	-105.7929	Pedernal	Bsmt	Abo on Bsmt.	Logs/Tops
30-027-20007	34.1637	-105.3411	Pedernal	Bsmt	Abo on Bsmt.	Logs/Tops
30-011-20013	34.2128	-104.2229	Pedernal	U Penn-Lwr Wlfcmp	Wolfcamp on Cisco	Tops
30-011-60002	34.2431	-104.0511	Pedernal	Bsmt	Hueco on Basement	Tops
30-011-05029	34.3198	-104.593	Pedernal	U Penn-Lwr Wlfcmp	Abo on Penn	Tops
30-027-20029	33.4591	-105.4546	Pedernal	Bsmt	Abo on Bsmt	Logs/Tops
42-465-30786	30.27628	-101.440124	Val Verde	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	Logs/Tops
WTGS1953: No. 6	30.4404	-101.082	Val Verde	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	WTGS 1953 Xsect
WTGS1963: No. 18	30.5625	-102.2353	Val Verde	U Penn-Lwr Wlfcmp	Upr Wlfcmp on Lwr Wlfcmp	WTGS 1963 Xsect

Supplement 3:
Orogrande and Tucumcari Basin Geohistories

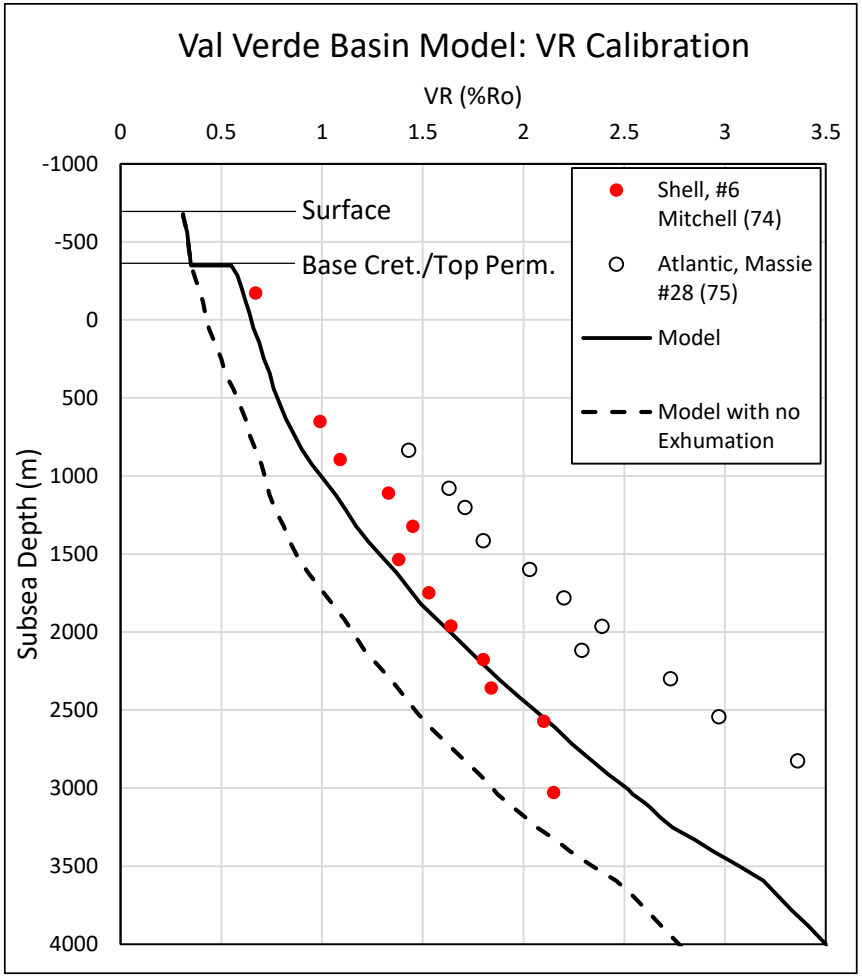
Orogrande and Tucumcari Basin Geohistories



Basin models from the Orogrande and Tucumcari basins.

Site	API No.	Latitude	Longitude
Orogrande North	30-035-20010	33.2945175	-106.04422
Orogrande South	30-035-20001	32.7578697	-106.1176529
Tucumcari	30-019-20069	35.03633	-104.468

Supplement 4:
Val Verde Basin Model Calibration



Points are measured VR values from 2 wells (Pawlewicz, et al., 2005). Site 74 is closest to the basin model location. Solid line is the predicted depth vs. VR from the basin model. Dashed line is the same model without exhumation of the missing Permian section