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September 21, 2011

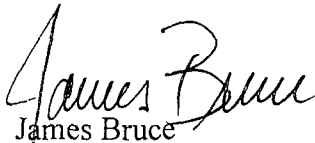
Jami Bailey, Director
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Re: Targa de novo case

Dear Ms. Bailey:

Enclosed are two additional exhibits (one by Momentum and one by Apache) that they may use at the hearing tomorrow.

Very truly yours,


James Bruce

Attorney for Apache Corporation

cc: William Scott w/encl. (via fax)

514 copies each -

Volumetric Calculation

Targa Midstream Services, LP
 Monument AGI #1
 30-025-40002
 S36 T19S R36E

3500bpd Case

CALCULATION ASSUMES RADIAL FLOW & HOMOGENEOUS INJECTION ZONE

Injection Volume	3500	bpd	(from applicant 3500bwpd avg rate)
Days	365	days	
Years	30	years	
Cumulative Injection Volume	38,325,000	bbls	(bpd x days x years)
Cumulative Injection Volume	215,179,545	cu ft	(5.6146 cu ft/bbl)
Reservoir Porosity Thickness	300	ft	(from applicant)
Average Reservoir Porosity	0.06		(from applicant)
Reservoir Porosity Feet	18	poro-ft	(thick x poro)
Cumulative Injection Plume Area (sq-ft)	11,954,419	sq ft	(cu ft/poro-ft)
Cumulative Injection Plume Area (ac)	274	ac	(sq ft/43560 sqft/ac)
Cumulative Injection Plume Radius (ft)	1951	ft	(sq rt(sq ft/3.14))

with 100% Safety Factor

Cumulative Injection Plume Area (sq-ft)	23,908,838	sq ft	(2 x cu ft/poro-ft)
Cumulative Injection Plume Area (ac)	549	ac	(sq ft/43560 sqft/ac)
Cumulative Injection Plume Radius (ft)	2759	ft	(sq rt(sq ft/3.14))

Prepared By
 James E Smith & Associates, Inc.
 9/15/2011

Oil Conservation Commission

Case No. _____

Exhibit No. 5

Monument

Radius of Injection assuming Heterogeneous Reservoir and Radial Flow		
Inputs and Assumptions		
Injection Volume (low case)	3,500	bpd
Days	365	days per year
Years	30	years
Conversion Factors		
1 barrel	5.615	ft ³
1 acre	43,560	ft ²
After 30 years:		
Cum Injection Volume	38,325,000	bbls
Cum Injection Volume	215,194,875	ft ³
Reservoir Net Pay	50	ft
Average porosity	6%	
Cum Injection Area	1,647	acres
Cum Injection Radius	4,778	ft

Oil Conservation

Case No. _____

Exhibit No. 6

Apache

Injection Volume	3500 bpd
Days	365 days per year
Years	30 years

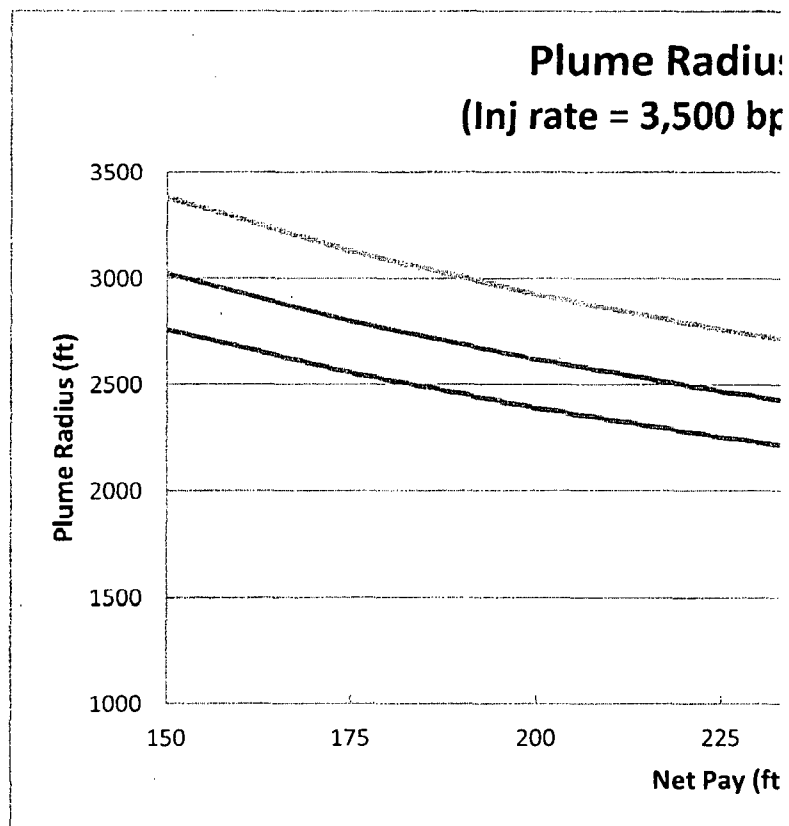
After 30 years:

Cum Injection Volume	38,325,000 bbls				
Cum Injection Volume	215,179,545 cu ft				
Reservoir Net Pay	150	175	200	225	250
Average porosity	0.06		(from Targa)		
Cum Injection Plume Area	2759	2554	2389	2252	2137
Cum Injection Plume Area	549 acres				

Cum Injection Volume	38,325,000 bbls				
Cum Injection Volume	215,179,545 cu ft				
Reservoir Net Pay	150	175	200	225	250
Average porosity	0.05		(from Targa)		
Cum Injection Plume Area	3022	2798	2617	2467	2341
Cum Injection Plume Area	659 acres				

Cum Injection Volume	38,325,000 bbls				
Cum Injection Volume	215,179,545 cu ft				
Reservoir Net Pay	150	175	200	225	250
Average porosity	0.04		(from Targa)		
Cum Injection Plume Area	3379	3128	2926	2759	2617
Cum Injection Plume Area	823 acres				

275	300
2037	1951
275	300
2232	2137
275	300
2495	2389



s vs Net Pay
d; Time = 30 yrs)

