



EXHIBIT "B"

SAN JUAN 27-4 UNIT

GEOLOGIC REPORT

PROPOSED THIRTEENTH EXPANSION

OF THE

DAKOTA PARTICIPATING AREA

EL PASO NATURAL GAS COMPANY

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Reservoir Engineering Dept.

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SAN JUAN 27-4 UNIT
RIO ARriba COUNTY, NEW MEXICO

GEOLOGIC REPORT
DAKOTA PRODUCING INTERVAL

PROPOSED THIRTEENTH EXPANSION
DAKOTA PARTICIPATING AREA

INTRODUCTION

The San Juan 27-4 Unit is located in the east-central portion of the San Juan Basin, Rio Arriba County, New Mexico. The original Unit area consisted of all Township 27 North, Range 4 West, which contains 23,046.19 acres. All of Sections 12, 25, 35 and the southeast quarter of 34, totaling 2,080.00 acres, have been eliminated from the Unit. The present area of the San Juan 27-4 Unit is now comprised of 20,966.19 acres.

Within Township 27 North, Range 4 West, the "Dakota Producing Interval" has been tested in 43 locations of which thirty-eight wells are currently productive. Four of the producing wells are located on acreage which has been eliminated from the unit area and one half of the acreage dedicated to a fifth well is also eliminated.

The New Mexico Oil Conservation Commission in Order No. R-1670-C, Rule 25, defines the "Dakota Producing Interval" as ". . . from the base of the Greenhorn limestone to a point 400 feet below the base of the said formation and consisting of the Graneros formation, the Dakota formation, and the productive upper portion of the Morrison formation." The lithology and stratigraphy of this interval in San Juan 27-4 Unit area have been discussed in reports which have been previously submitted.

Included as a part of this report are two maps entitled Exhibit "C". Exhibit "C", Figure No. 1 shows the configuration of the subsurface structure of the Dakota interval using mean sea level as the datum plane, the top of the Graneros shale as the mapping horizon, and a contour interval of 50 feet. Present structural control indicates the Dakota interval is dipping gently to the northeast in the general area of the acreage proposed for admission to the participating area. The axial trace of the synclinal trough of the San Juan Basin is located along the eastern boundary of the Unit. The trough is generally plunging to the north-northwest in this portion of the Basin. As is true for the whole of the San Juan Basin for the most part, stratigraphic rather than structural conditions control the occurrence of hydrocarbons within the San Juan 27-4 Unit. Exhibit "C", Figure 2 is an isopachous map with a contour interval of 10 feet which shows the number of feet of net reservoir sand in the "Dakota Producing Interval" that is interpreted to be present in the unit and adjacent areas.

Also included with this report is Exhibit "D", Table No. 1 which is a tabulation of San Juan 27-4 Unit Dakota gas production. This tabulation shows by well the absolute open flow potential, date of first delivery into the gathering system, cumulative gas production to January 1, 1974, production by months for 1974 from January through December, 1974 annual production to January 1, 1975 and cumulative production to January 1, 1975. Wells within the Unit Area have produced a cumulative total of 16,281,885 Mcf as of January 1, 1975.

PROPOSED THIRTEENTH EXPANSION OF THE
DAKOTA PARTICIPATING AREA

Effective Date: January 1, 1975

The proposed Thirteenth Expansion of the Dakota Participating Area is based upon the completion of the San Juan 27-4 Unit No. 94 well by El Paso Natural Gas Company, the Unit operator. This well is located 454 feet from the south line, 950 feet from the west line, Section 3, Township 27 North, Range 4 West, Rio Arriba County, New Mexico. On January 17, 1975 the well was tested for three hours through a 0.75 inch choke on 1.990 inch tubing with the following test results:

Shut-in	7 Days
SIPC	2,251 psia
SIPT	989 psia
FPT	106 psia
WPC	598 psia
IP	1,277 Mcf/D
AOF	1,349 Mcf/D

Proposed Expanded Area

Township 27 North, Range 4 West
Section 3: West half

The San Juan 27-4 Unit No. 94 well produces from the sandstone development within the Graneros shale and from the Dakota "A" and "B" zones. These producing sands correlate with the producing sands of adjacent wells in both the 27-4 and 28-4 San Juan Units. The proposed expanded acreage is inferred to be capable of producing unitized substances in commercial quantities from the Graneros sandstone and from the Dakota "A" and "B" zones. Exhibit "C", Figure No. 2 illustrates the net reservoir sand which is interpreted to be present under the acreage proposed for admission to the Dakota Participating Area by the Thirteenth Expansion.

EXHIBIT 'D'11
TABLE NO. 1
SAN JUAN 27-4 DK
RIO ARriba COUNTY, NEW MEXICO

VOLUMES IN MCF AT 15.025 PSIA AND 60 DEGREES F.

WELL NAME AND NO.	ADP MCF/D	DATE OF FIRST DELIVERY	1-1-74 CUM PROD	JAN.	FEB.	MAR.	1974 MONTHLY PRODUCTION	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.	1974 PROD	01-01-75 CUM PROD
							APR.	MAY								
8J 27-4 UNIT #14	4206	56/09/26	1322633	3808	3287	2847	0	2804	0	3984	0	0	0	0	0	0
8J 27-4 UNIT #5	2131	56/12/20	686359	2552	0	3286	3753	2805	4108	3708	2921	4035	3626	3759	40669	1363302
8J 27-4 UNIT #14 DK	969	58/01/27	693887	5093	3735	3305	4665	4378	4101	3708	5882	3914	4519	4212	43112	691871
8J 27-4 UNIT #16	5594	58/11/01	658555	0	0	0	0	0	0	3708	3295	0	3887	4203	47718	947105
8J 27-4 UNIT #16R	4498	58/11/01	99714	0	0	0	0	0	0	0	0	0	0	0	0	65855
8J 27-4 UNIT #30	3788	62/04/24	870818	5820	3108	3945	9610	5211	3946	4370	3547	4439	4511	4744	50272	1499866
CHAMPLIN #1 DK	6070	63/07/11	276449	382	383	0	0	0	0	6711	6400	7213	6973	3458	61928	932801
CHAMPLIN #8 DK	2309	63/09/05	261388	596	419	0	0	0	0	2143	2123	1433	1409	7469	283918	283918
CHAMPLIN #6 DK	668	63/12/26	162326	1084	472	1227	1598	951	564	925	1467	1801	1443	1348	13109	276477
CHAMPLIN #8 DK	1032	63/12/26	39781	0	0	571	790	989	723	0	1150	1415	1025	941	9133	171589
8J 27-4 UNIT #P #34	1424	65/04/19	420881	4101	2849	2796	0	3201	2933	3881	4882	3779	4067	4203	42286	39761
8J 27-4 UNIT #37	1742	65/10/26	385230	3048	1391	3128	3637	2865	3136	3218	2882	3866	3511	1862	35920	463147
8J 27-4 UNIT #44	5843	68/10/21	2088038	4108	31519	28105	33438	6735	8896	3218	2882	3866	3511	1862	35920	421170
8J 27-4 UNIT #45	3746	68/10/30	298585	3779	2801	2319	3790	3339	2861	0	0	5089	45055	36522	281646	2286884
8J 27-4 UNIT #47	3507	68/10/31	122301	2200	632	0	3134	3352	3266	830	917	431	3384	5116	25535	333381
8J 27-4 UNIT #43	3238	68/11/18	106502	0	0	0	0	0	0	0	0	0	0	0	0	147836
8J 27-4 UNIT #38	6032	68/12/07	279660	2409	2748	2399	2602	7416	3742	3016	3265	3629	3008	2721	42467	322127
8J 27-4 UNIT #48	4489	68/12/07	351258	2402	1791	2376	2173	2741	3146	4088	3821	612	930	4416	39887	435245
8J 27-4 UNIT #39	3503	68/12/20	343399	3089	2385	2485	2782	4093	4088	3245	2586	4625	3112	2612	41265	425646
8J 27-4 UNIT #42	3386	68/12/21	337467	3860	1715	2885	1286	4897	2864	2868	2517	3825	2344	2880	33697	371384
8J 27-4 UNIT #51	3357	68/12/24	387730	4050	1384	4394	4671	3196	2338	2982	3771	3630	3905	3348	41000	388730
8J 27-4 UNIT #53	3273	68/12/24	377114	5282	2140	317	5874	9490	4848	4896	6858	6745	6806	6379	67206	444320
8J 27-4 UNIT #50	5804	69/01/06	375846	2085	72	3692	4985	4880	4848	3869	4880	4824	4664	4366	48306	420152
8J 27-4 UNIT #46	4019	69/02/28	275613	1022	651	939	1734	6131	3707	2566	3905	4980	4236	2927	38453	312066
8J 27-4 UNIT #41	6550	69/03/08	1306688	22959	21423	19182	21953	8870	0	6667	27471	29301	27044	25018	218685	1525353
8J 27-4 UNIT #41	3644	69/04/15	275581	972	415	78	1184	1067	0	0	1101	3025	297	2815	10974	285555
8J 27-4 UNIT #54	4870	69/04/15	328337	4219	833	0	3618	5379	5243	4137	1790	3261	3381	1446	38278	366605
8J 27-4 UNIT #52	2780	69/04/16	315280	3255	2888	2400	3131	5670	3904	3501	2751	3505	2545	2791	41773	357023
8J 27-4 UNIT #40	595	70/07/28	1874	0	0	0	0	0	0	0	0	0	0	0	0	1874
8J 27-4 UNIT #55	2386	71/05/27	534100	13859	12270	10712	13861	13616	14869	13512	9580	11874	11950	6314	146212	680312
8J 27-4 UNIT #59	2181	71/10/08	325488	9738	8400	10386	10287	7029	22143	13122	5709	15864	13690	12573	148510	535058
8J 27-4 UNIT #58	4259	71/10/12	270416	7476	3020	6854	7103	4959	6852	6852	6892	5988	5426	2793	67358	337774
8J 27-4 UNIT #57	2013	71/11/04	102993	2082	1588	2120	2168	2190	1810	1285	1622	890	2168	1627	21528	124521
8J 27-4 UNIT #56	1689	71/12/02	25771	908	335	761	134	2612	343	146	394	481	831	915	8968	34739
8J 27-4 UNIT #60	2159	72/07/06	166638	3674	0	3212	8403	6157	2901	3052	1975	4841	4408	4461	48457	209086
8J 27-4 UNIT #71	1258	74/03/20	0	0	0	2509	6602	5562	68	0	0	0	0	824	19482	19482
8J 27-4 UNIT #49	2618	74/07/10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8J 27-4 UNIT #48	481	75/04/28	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8J 27-4 UNIT #48	1349	75/05/06	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8J 27-4 UNIT #44	1893	75/05/08	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8J 27-4 UNIT #70	1231	75/05/28	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8J 27-4 UNIT #69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTALS	14475666	166883	114721	132997	102830	159280	132529	142361	113184	124994	203917	186093	166430	1806219	16281885	