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EXHIBIT "B"
HUERFANO UNIT
SAN JUAN COUNTY, NEW MEXICO
GEOLOGIC REPORT
GALLUP PRODUCING INTERVAL
PROPOSED EIGHTEENTH EXPANSION
OF THE GALLUP PARTICIPATING AREA

EL PASO NATURAL GAS COMPANY

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Reservoir Engineering Dept.

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INTRODUCTION

The Huerfano Unit, located in the southwestern portion of the San Juan Basin, is comprised of 63,120.76 acres in Townships 25, 26 and 27 North, Ranges 9, 10 and 11 West, San Juan County, New Mexico.

Hydrocarbons are produced in this unit from three horizons of upper Cretaceous age. In descending order these are: (1) Pictured Cliffs sandstone (2) Gallup member of the Mancos, and (3) Dakota Producing Interval.

The Gallup member of the Mancos within the Huerfano Unit of San Juan County, New Mexico is of Upper Cretaceous Age and is described as being a series of interbedded gray, medium to fine grained, calcareous, shaly sandstones and dark gray to black shales. Electric log correlations show a distinct lensing effect within the Gallup member which results in relatively clean sands in one well being equivalent to very shaly sands in an offset well. Many of the wells in the Huerfano Unit have a certain amount of fracturing in the Gallup which helps to increase the productivity, especially in the shaly sand sections.

Included with this report as Exhibit "C," is a structure map contoured on top of the Gallup member of the Mancos formation. This map shows the gentle regional dip to the northeast and the general lack of any structural developments which could be utilized in predicting productive trends. A majority of the sands (including the Gallup in this area) deposited by the Upper Cretaceous seas within the San Juan Basin have a prevalent northwest-southeast trend.

Also included with this report as Exhibit "D," Table No. 1 is a tabulation of the Huerfano Unit Gallup 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 October, 1974 annual production to November 1, 1974 and cumulative gas production to November 1, 1974. Wells within the Gallup Participating Area have produced a cumulative total of 47,027,674 Mcf as of November 1, 1974.

Exhibit "D," Table No. 2 is a tabulation of the Huerfano Unit Gallup oil production. This tabulation shows by well cum oil production to January 1, 1974, production by months for 1974 from January through October 1974, annual production to November 1, 1974 and cum oil production to November 1, 1974. Wells within the Gallup Participating Area have produced a cumulative total of 653,248 barrels of oil as of November 1, 1974.

PROPOSED EIGHTEENTH EXPANSION
OF THE GALLUP PARTICIPATING AREA

Effective Date: November 1, 1974

The proposed Eighteenth Expansion of the Gallup Participating Area is based upon the completion of the Huerfano Unit No. 256 well by El Paso Natural Gas Company, the Unit operator. This well is located 1180 feet from the south line and 1550 feet from the east line in Section 31, T-27-N, R-9-W, San Juan County, New Mexico.

On October 30, 1974 the Huerfano Unit No. 256 well was tested for three hours through a 2.750 inch orifice and four inch meter run on 2.375 inch tubing with the following test results:

| | |
|---------|-----------|
| Shut-in | 7 Days |
| SIPC | 912 psia |
| SIPT | 463 psia |
| FPT | 31 psia |
| WPC | 38 psia |
| IPF | 295 Mcf/D |
| AOF | 296 Mcf/D |

Proposed Expanded Acreage

Township 27 North, Range 9 West

Section 31: East half

Huerfano Unit No. 256 well was perforated throughout the Gallup section from 5856 feet to 6124 feet. Upon being put on production, the monthly average production of gas and condensate have been as follows: December 1974, 160 Mcf/D and 1119 barrels; January 1975, 0 Mcf/D and 1386 barrels; February 1975, 58 Mcf/D and 656 barrels; March 1975, 87 Mcf/D and 17 barrels; April 1975, 208 Mcf/D and 1093 barrels; May 1975, 147 Mcf/D and 915 barrels.

This proposed acreage is inferred to be capable of producing unitized substances in commercial quantities from the Gallup member of the Mancos formation.

EXHIBIT 'D'
TABLE NO. 1
GAL
HUERFANO
SAN JUAN COUNTY, NEW MEXICO

VOLUMES IN MCF AT 15,025 PSIA AND 60 DEGREES F.

| WELL NAME AND NO. | ADF MCF/D | DATE OF FIRST DELIVERY | CURRENT WELL STATUS | 1974 MONTHLY PRODUCTION | | | | | | | | | | | | 1974 CUM PROD |
|--------------------------|-----------|------------------------|---------------------|-------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----------|------------------|---------------|
| | | | | JAN. | FEB. | MAR. | APR. | MAY | JUNE | JULY | AUG. | SEPT. | OCT. | 1974 PROD | 11-1-74 CUM PROD | |
| MCADAMS #1 | 9010 | 58/04/30 | | 2367 | 3664 | 3826 | 3425 | 2828 | 3409 | 3185 | 3427 | 3604 | 3374 | 33109 | 2045063 | |
| MCADAMS #2 GL | 15827 | 58/05/27 | | 7633 | 10476 | 10380 | 9884 | 7696 | 9823 | 6600 | 10900 | 11192 | 11645 | 98029 | 3723806 | |
| HUERFANO UNIT #99 GL | 10157 | 58/10/31 | | 12728 | 14276 | 15656 | 16051 | 13028 | 16926 | 13876 | 18053 | 18067 | 16051 | 154572 | 5351455 | |
| MCADAMS #3 GL | 21912 | 58/11/07 | | 497 | 902 | 1134 | 1148 | 928 | 1101 | 819 | 936 | 889 | 1230 | 9604 | 1094944 | |
| HUERFANO UNIT #103 GL | 5827 | 59/03/06 | | 1462 | 1246 | 1354 | 861 | 1208 | 1289 | 1205 | 1267 | 804 | 973 | 11209 | 1924311 | |
| HUERFANO UNIT #92 GL | 1565 | 59/03/24 | | 4256 | 4350 | 3179 | 2792 | 3403 | 2795 | 2800 | 3201 | 3576 | 1399 | 31623 | 1345946 | |
| HUERFANO UNIT #105 GL | 2216 | 59/04/07 | | 23100 | 14594 | 14756 | 8290 | 7379 | 11958 | 15984 | 17554 | 16873 | 15555 | 146143 | 4144976 | |
| HUERFANO UNIT #106 GL | 9367 | 59/04/28 | | 16763 | 15391 | 16510 | 21795 | 20498 | 15214 | 20046 | 20304 | 20134 | 20689 | 187344 | 4917750 | |
| HUERFANO UNIT #107 GL | 1188 | 59/06/26 | DISC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 842897 | |
| HUERFANO UNIT #104 GL | 442 | 59/07/02 | DISC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 217506 | |
| HUERFANO UNIT #109 GL | 3036 | 59/11/28 | | 9207 | 8535 | 7463 | 4519 | 7320 | 7798 | 6383 | 10962 | 7554 | 8867 | 80578 | 3048626 | |
| HUERFANO UNIT NP #111 GL | 2198 | 59/12/11 | | 2681 | 2684 | 2711 | 1677 | 2538 | 1716 | 1888 | 1967 | 2365 | 1392 | 21551 | 707509 | |
| MC ADAMS #5 | 0 | 60/02/01 | P & A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41575 | |
| HUERFANO UNIT NP #110 | 821 | 60/02/18 | | 460 | 513 | 472 | 407 | 571 | 567 | 491 | 526 | 399 | 515 | 4921 | 349164 | |
| HUERFANO UNIT #108 GL | 1227 | 60/03/15 | | 5043 | 5067 | 5282 | 1825 | 6444 | 4776 | 3813 | 5687 | 3289 | 5712 | 46938 | 2945331 | |
| HUERFANO UNIT #112 | 292 | 60/03/31 | | 815 | 1961 | 2327 | 2129 | 2726 | 2827 | 1781 | 2188 | 1653 | 2136 | 20513 | 534044 | |
| HUERFANO UNIT NP #116 GL | 272 | 61/02/10 | | 1271 | 1153 | 1011 | 680 | 1078 | 1080 | 855 | 997 | 596 | 747 | 9438 | 369337 | |
| HUERFANO UNIT #101 GL | 1000 | 61/02/14 | | 5817 | 4390 | 4851 | 7018 | 6498 | 4780 | 6441 | 6539 | 6517 | 6851 | 59672 | 1303265 | |
| HUERFANO UNIT #113 GL | 2127 | 61/02/21 | | 17079 | 13887 | 11410 | 20330 | 18836 | 14288 | 18486 | 18334 | 18722 | 19113 | 170915 | 5364019 | |
| HUERFANO UNIT #160 | 517 | 70/12/03 | | 27928 | 26931 | 25500 | 18618 | 24230 | 23268 | 22173 | 22030 | 21027 | 13913 | 225556 | 1379114 | |
| MCADAMS #1 GL | 23705 | 71/02/09 | DISC | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3273288 | |
| HUERFANO UNIT #136 | 155 | 72/01/09 | | 9836 | 7031 | 10890 | 9758 | 9956 | 9789 | 7036 | 9051 | 8888 | 8570 | 90205 | 320987 | |
| HUERFANO UNIT #232 | 294 | 73/06/19 | | 3135 | 3179 | 2869 | 2085 | 2675 | 3091 | 2761 | 3256 | 2554 | 1978 | 27883 | 48854 | |
| HUERFANO UNIT #232 | 294 | 73/06/19 | | 3135 | 3179 | 2869 | 2085 | 2675 | 3091 | 2761 | 3256 | 2554 | 1978 | 27883 | 48854 | |
| HUERFANO UNIT #231 | 1002 | 73/06/19 | | 18663 | 16262 | 10172 | 10917 | 15435 | 15041 | 10640 | 11523 | 10889 | 9646 | 127188 | 224949 | |
| HUERFANO UNIT #241 | 1434 | 73/09/12 | | 88017 | 48267 | 52655 | 37910 | 47819 | 44990 | 42828 | 41133 | 37860 | 24218 | 432677 | 643356 | |
| HUERFANO UNIT #242 | 245 | 73/09/12 | | 1658 | 1602 | 1454 | 982 | 1649 | 1490 | 1398 | 1750 | 1655 | 1415 | 15053 | 19793 | |
| HUERFANO UNIT #238 | 308 | 73/09/13 | | 21944 | 22474 | 22891 | 15636 | 20187 | 19554 | 18413 | 17970 | 17184 | 10746 | 186851 | 227562 | |
| HUERFANO UNIT #233 | 449 | 73/09/13 | | 5643 | 3931 | 4440 | 4491 | 4600 | 4827 | 3295 | 4322 | 4189 | 3827 | 43165 | 69285 | |
| HUERFANO UNIT #234 | 348 | 73/09/19 | | 3217 | 4523 | 4615 | 3378 | 4228 | 4000 | 3988 | 4071 | 3642 | 2158 | 37980 | 41920 | |
| HUERFANO UNIT #236 | 457 | 73/09/19 | | 5234 | 3446 | 4316 | 4305 | 4286 | 4060 | 2988 | 3913 | 3613 | 3710 | 39821 | 59451 | |
| HUERFANO UNIT #247 | 547 | 73/09/19 | | 3005 | 3002 | 3553 | 2851 | 4011 | 3780 | 4289 | 4577 | 3134 | 4744 | 36948 | 42094 | |
| HUERFANO UNIT #240 | 748 | 73/09/20 | | 12105 | 8317 | 10373 | 11562 | 13740 | 12181 | 8867 | 11521 | 11388 | 11041 | 10985 | 148952 | |
| HUERFANO UNIT #237 | 263 | 73/10/31 | | 0 | 405 | 1355 | 1247 | 1479 | 2314 | 2382 | 2140 | 2387 | 948 | 14857 | 14775 | |
| HUERFANO UNIT #239 | 423 | 74/03/08 | | 0 | 0 | 12832 | 24061 | 31850 | 29982 | 27151 | 26889 | 25417 | 17234 | 194536 | 194536 | |
| HUERFANO UNIT NP #257 | 303 | 74/11/29 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| HUERFANO UNIT #256 | 296 | 74/11/30 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| HUERFANO UNIT #249 | 212 | 75/01/20 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| TOTALS | | | | 283151 | 253608 | 272488 | 252717 | 290799 | 280243 | 268287 | 290134 | 272335 | 232375 | 2696147 | 47027674 | |
| | | | | 44331527 | 283151 | 253608 | 252717 | 290799 | 280243 | 268287 | 290134 | 272335 | 232375 | 2696147 | 47027674 | |

EXHIBIT "D"
 TABLE NO. 2
 HUERFANO UNIT
 GALUP OIL PRODUCTION, BRLS.
 SAN JUAN COUNTY, NEW MEXICO

| WELL NAME AND NO. | CUM. PROD. TO 1-1-74 | 1974 MONTHLY PRODUCTION | | | | | | | | | | | | TOTAL PROD. FROM 1-1-74 TO 11-1-74 | CUM. PROD. TO 11-1-74 | | | |
|-------------------------|-------------------------|-------------------------|----------|-------|-------|------|------|------|--------|-----------|---------|------|------|--|--------------------------|-------|--------|-------|
| | | JANUARY | FEBRUARY | MARCH | APRIL | MAY | JUNE | JULY | AUGUST | SEPTEMBER | OCTOBER | | | | | | | |
| MCADAMS #1 | 21055 | 86 | 46 | 43 | 20 | 25 | 26 | 22 | 24 | 28 | 22 | 22 | 24 | 28 | 22 | 342 | 21397 | |
| MCADAMS #2 6L | 25054 | 62 | 23 | 83 | 148 | 111 | 95 | 62 | 119 | 99 | 109 | 109 | 99 | 99 | 99 | 911 | 25965 | |
| HUERFANO UNIT #99 6L | 34236 | -0- | 102 | 100 | 75 | 99 | 98 | 144 | 99 | 150 | 83 | 83 | 150 | 150 | 83 | 970 | 35206 | |
| MCADAMS #3 6L | 53042 | 32 | 56 | 75 | 62 | 64 | 84 | 23 | 62 | 57 | 67 | 67 | 57 | 67 | 67 | 592 | 53834 | |
| HUERFANO UNIT #103 | 17215 | -0- | -0- | -0- | -0- | 66 | 24 | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | 90 | 17305 | |
| HUERFANO UNIT #92 | 10346 | -0- | -0- | 75 | -0- | -0- | -0- | 68 | -0- | 21 | 164 | 164 | 21 | 164 | 164 | 1030 | 10530 | |
| HUERFANO UNIT #105 | 74868 | 100 | 99 | 69 | -0- | 92 | 99 | 198 | 68 | 98 | 187 | 187 | 98 | 187 | 187 | 10580 | 75588 | |
| HUERFANO UNIT #106 | 71808 | -0- | 203 | 75 | 100 | 99 | 98 | 198 | 99 | 164 | 1036 | 1036 | 164 | 1036 | 1036 | 72644 | 72644 | |
| HUERFANO UNIT #107 | 71146 | DISC. | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | 71146 | 71146 |
| HUERFANO UNIT #104 | 43632 | DISC. | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | 43632 | 43632 |
| HUERFANO UNIT #109 | 19865 | -0- | -0- | 89 | 72 | -0- | 98 | -0- | 98 | 98 | 78 | 78 | 98 | 98 | 98 | 533 | 20398 | |
| HUERFANO UNIT NP #111 | 3744 | -0- | -0- | 53 | -0- | -0- | -0- | -0- | 42 | -0- | 54 | 54 | -0- | -0- | -0- | 149 | 3893 | |
| MCADAMS #5 | 3183 | P&A | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | 3183 | 3183 |
| HUERFANO UNIT NP #110 | 21052 | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | 21052 | 21052 |
| HUERFANO UNIT #108 | 27003 | -0- | 100 | -0- | -0- | 99 | -0- | -0- | 98 | 98 | 68 | 68 | 98 | 98 | 98 | 365 | 27368 | |
| HUERFANO UNIT #112 | 83514 | -0- | 120 | 237 | 301 | 289 | 308 | 227 | 282 | 249 | 242 | 242 | 249 | 249 | 242 | 2255 | 85769 | |
| HUERFANO UNIT NP #116 | 3648 | -0- | -0- | -0- | -0- | 37 | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | 37 | 3645 | |
| HUERFANO UNIT #101 | 23168 | 62 | 86 | 75 | 91 | 74 | -0- | 99 | 98 | 98 | 100 | 100 | 98 | 98 | 100 | 685 | 23853 | |
| HUERFANO UNIT #113 | 16971 | 101 | -0- | -0- | 162 | 98 | 99 | -0- | 198 | 100 | 778 | 778 | 100 | 100 | 100 | 17749 | 17749 | |
| HUERFANO UNIT NP #151=y | 2033 | P&A | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | 2033 | 2033 |
| HUERFANO UNIT #160 | 5508 | 101 | 101 | 201 | 100 | 99 | 98 | 96 | 164 | 99 | 100 | 100 | 99 | 99 | 100 | 1179 | 6687 | |
| HUERFANO UNIT #160 | 25219 | DISC. | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | 25219 | 25219 |
| HUERFANO UNIT #138 | 649 | -0- | -0- | 73 | -0- | -0- | -0- | -0- | 55 | -0- | -0- | -0- | -0- | -0- | -0- | 128 | 777 | |
| HUERFANO UNIT #231 | 934 | 203 | 75 | 201 | 100 | 99 | 98 | 98 | 197 | 197 | 200 | 200 | 197 | 197 | 200 | 1468 | 2402 | |
| HUERFANO UNIT #232 | 669 | -0- | 101 | 100 | -0- | 99 | 98 | 109 | 99 | 94 | 100 | 100 | 94 | 94 | 100 | 1705 | 1574 | |
| HUERFANO UNIT NP #242 | 753 | -0- | 96 | 162 | 73 | 98 | 72 | 43 | 85 | 54 | 62 | 62 | 54 | 54 | 62 | 745 | 1498 | |
| HUERFANO UNIT #241 | 922 | 202 | 202 | 234 | 201 | 199 | 214 | 197 | 197 | 198 | 200 | 200 | 198 | 198 | 200 | 2044 | 2966 | |
| HUERFANO UNIT #238 | 280 | 101 | 147 | 166 | 100 | 99 | 98 | 100 | 103 | 98 | 101 | 101 | 98 | 98 | 101 | 1169 | 1449 | |
| HUERFANO UNIT #233 | 552 | 101 | 99 | 98 | 100 | 89 | 92 | 111 | 94 | 94 | 94 | 94 | 94 | 94 | 94 | 574 | 1528 | |
| HUERFANO UNIT #207 | 358 | -0- | 94 | 71 | -0- | 118 | -0- | 88 | 34 | 50 | 99 | 99 | 50 | 50 | 99 | 858 | 858 | |
| HUERFANO UNIT #334 | 518 | 101 | 78 | 195 | 71 | 96 | -0- | 96 | 118 | 67 | 100 | 100 | 67 | 67 | 100 | 798 | 1313 | |
| HUERFANO UNIT #236 | 661 | 100 | 100 | 60 | 89 | 136 | 86 | 71 | 60 | 67 | 94 | 94 | 67 | 67 | 94 | 891 | 1752 | |
| HUERFANO UNIT #260 | 705 | -0- | 98 | 98 | 83 | 89 | -0- | 83 | 42 | -0- | 5 | 5 | 42 | 42 | 5 | 366 | 1031 | |
| HUERFANO UNIT #237 | -0- | -0- | -0- | 100 | 99 | 72 | 99 | 99 | 112 | 99 | 194 | 194 | 99 | 99 | 194 | 471 | 471 | |
| HUERFANO UNIT #239 | -0- | -0- | -0- | -0- | 99 | 300 | 193 | 99 | 206 | 206 | 200 | 200 | 194 | 194 | 200 | 1493 | 1493 | |
| HUERFANO UNIT NP #257 | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- |
| HUERFANO UNIT #256 | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- |
| HUERFANO UNIT #249 | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- | -0- |
| TOTAL | 630506 | 1352 | 2005 | 2871 | 2392 | 2551 | 2088 | 2267 | 2653 | 2194 | 2369 | 2369 | 2194 | 2194 | 2369 | 22742 | 653248 | |