| Form 9–331   | 5 USGS, Fmn  | 2 MF                       | 1/TR            | l File                |                | pproved.<br>Bureau No. 42–R1424            |                |
|--|--|----------------------------|-----------------|-----------------------|----------------|--|----------------|
| Dec. 1973  | UNITED STA   | ATES                       |                 | 5. LEASE              | • • :          | \$ 17                                      | •              |
|  | DEPARTMENT OF T  | HE INTERIOR                |                 | NM 2869               |                |  | -              |
|  | GEOLOGICAL S   |                            |                 | 6. IF INDIAN          | , ALLOTTEE C   | OR TRIBE NAME                              | _              |
| SUNDR  | Y NOTICES AND R  | 7. UNIT AGR                | EEMENT NA       | ME                    | _              |  |                |
| (Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use Form 9–331–C for such proposals.) |  |                            |                 | 8. FARM OR<br>Emerald |                |  |                |
| 1. oil gas WX other  |  |                            |                 | 9. WELL NO.           |                |  |                |
| DUGA   | F OPERATOR<br>IN PRODUCTION CORP.  |                            |                 | 10. FIELD OR          |                | ME<br>Blanco Ext.                          |                |
| P 0  | s of OPERATOR<br>Box 208, Farmingto  | 11. SEC., T.,              |                 | K. AND SURVEY O       | २              |  |                |
| 4. LOCATIO   | N OF WELL (REPORT LOC  | ATION CLEARLY, Se          | e space 17      | AREA<br>Soc 17        | T24N R1W       |  |                |
| below.)  | FACE: 1110' FSL - 8  | 350' FWL                   |                 | 12. COUNTY            |                |  |                |
| AT TOP PROD. INTERVAL:   |  |                            |                 | Rio Arr               | riba _         | NM   |                |
| AT TOTA  | L DEPTH:   |                            |                 | 14. API NO.           |                |  |                |
| 16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE,  |  |                            |                 |                       |                | DE KOR AND WE                              |                |
| <b>R</b> EPORT,  | REPORT, OR OTHER DATA  |                            |                 |                       |                | DF KDB, AND WD                             | ')             |
| REQUEST FO   | OR APPROVAL TO:  | SUBSEQUENT REPO            | RT OF:          | 7515(                 | <u> </u>       |  | -              |
| TEST WATER   |  |                            |                 |                       |                |  |                |
| FRACTURE T   |  |                            |                 |                       |                |  |                |
| SHOOT OR A   | <u></u>  |                            |                 |                       |                | tiple completion or zon                    | 1-2            |
|  | TER CASING   |                            |                 | chang                 | e on Form 9-3: | 30.7<br>= ± = =                            | 5              |
| MULTIPLE C<br>CHANGE ZO  |  | H                          |                 |                       | 를 취임 등         |  | <u>.</u> .     |
| ABANDON*   |  | ₩ Comp                     | letion          | 즉<br>~                |                |  | :.             |
| (other)  |  | XX COMP                    | recion          |                       |                |  | <u>.</u>       |
|  | BE PROPOSED OR COMPLI<br>g estimated date of starting<br>ed and true vertical depths f |                            |                 |                       |                | give pertinent date<br>urface locations an | s,<br>d        |
|  |  |                            |                 |                       |                |  |                |
| 2e   | e reverse for repo   | frac 11-                   | 12              |                       |                | · ·  |                |
|  |  | tubing 1                   | 1-13-81.        |                       |                |  |                |
|  |  |                            |                 |                       |                |  |                |
|  |  |                            |                 |                       | 5 4 5 4 5      | 30v 10 198                                 | 31             |
|  |  |                            |                 |                       |                | NU V                                       | ::             |
|  |  |                            |                 |                       | i i i i i      | 0-2  |                |
|  |  |                            |                 |                       |                |  | AS A.          |
|  |  |                            |                 |                       |                | 3  | e <sup>e</sup> |
| Cubaurfaas   | Safety Valve: Many. And Typ  | e                          |                 |                       | Set (          | @ F  | īt.            |
|  | <b>1</b> 1/1   | true and correct           |                 |                       |                |  |                |
| 18. I hereby   | J. A. Wuga   | TITLE Petr                 | roleum Er       | ngineer               | -11-           | 16-81                                      |                |
| alditty  | Thomas A.  | Dugan (This space for Fede | rat or State of | ffice use)            | - F            | GEF9 : HEIGH                               | -<br>Tecoad    |
| APPROVED B   | ·  | TITLE                      |                 | DATE _                | <u> </u>       |  |                |
| CONDITIONS   | OF APPROVAL, IF ANY.   |                            |                 |                       |                | 日期OV <u>1度</u> 19                          | 21             |
|  |  | !<br>4                     |                 |                       | -::            | AGAMINGTON CHAT                            | Ry] H          |
|  |  | *See Instruction           | s on Reverse    | Side                  | ВУ             | sian 11                                    | will           |

\*See Instructions on Reverse Side

DUGAN PRODUCTION CORP. Emerald #1 Page 2

11-5-81 600 psi. Bumped plug with 2000 psi. Float failed to hold. Left pressure on csg. for 1 hr. Released pressure, held OK. Set csg. slips and cut off csg. Released rig at 12:00 midnight 11-4-81. Calculated cement top 2000'.

## DAILY REPORT

- 11-10-81 Move in MTK Inc. Rig #2. S.D.O.N.
- Rig up MTK Inc. Wait 4 hrs. on bolt for draw-works brake. T.I.H. w/ tbg. Tag cement at 3520' GL. Rig up Western Co. and circulate hole clean w/ 10 bbls fresh water. Spot 250 gals 7½% inhibited HCL from 3496-3120' GL. P.O.O.H. w/ tbg. S.D.O.N.
- 11-12-81 Rig up Jetronics Inc. and run Gamma Ray-CCL correlation log from PBTD 3513' to 3100' and from 2800 to 1900'.

Perforate Pictured Cliffs formation using 3-1/8" hollow carrier gun at 3554-58' and 3466-72' for a total of 12 holes.

Rig up Western Co. and foam fracture the Pictured Cliffs Fm. using 70%  $N_2$  foam as follows:

10,000 gals foam pad 10,000 gals foam w/ 1 ppg 10-20 sand 12,500 gals foam w/ 2 ppg 10-20 sand 2,320 gals foam flush

Total fluid: 248 bbls water, 329,420 SCF of  $\mathrm{N}_2$ , 76 gals frac foam

Total Sand: 35,000 # 10-20 mesh

Treating pressures: Max  $\pm 1850$  psi, Min  $\pm 1350$  psi, Ave 1500 psi ISDP  $\pm 1000$  psi, 10 min. shut-in  $\pm 950$  psi Averate injection rate  $\pm 20$  BPM

Well opened to atmosphere thru 1" choke at 2:05 p.m. S.D.O.N.

11-13-81 Well flowing approx. 600 MCF/day of gas and large amounts of water. T.I.H. w/ tbg. Tag sand at 3487' (all perfs clear).

Ran 107 jts. of  $1\frac{1}{2}$ " 2.4#, V-55, 10 Rd, EUE tubing. T.E. 3459.14 set at 3458' GL. Flange up well head and rig down.