Form 9-331 (May 1963)

UNITED STATES SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved. Budget Bureau No. 42-R1424. 5. LEASE DESIGNATION AND SERIAL NO.

GEOLOGICAL SURVEY

SF078056

| | THE PROPERTY OF THE PROPERTY O | 6. IF INDIAN, ALLOTTEE OR TRIBE NAME | |
|---------|--|---|--|
| | SUNDRY NOTICES AND REPORTS ON WELLS. (Do not use this form for proposals to drill or to deepen or plug back to predict reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.) | | |
| 1. | 1982 | 7. UNIT AGREEMENT NAME | |
| | OIL GAS WELL X OTHER | Central Bisti Lower Gallu | |
| 2. | NAME OF OPERATOR | 8. FARM OR LEASE NAME Uni | |
| | Hixon Development Company ADDRESS OF OPERATOR | | |
| 3. | ADDRESS OF OPERATOR | 9. WELL NO. | |
| | P.O. Box 2810, Farmington, New Mexico 87401 | Federal "C" No. 2 | |
| 4. | LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* | 10. FIELD AND POOL, OR WILDCAT | |
| | See also space 17 below.) At surface | Bisti Lower Gallup | |
| | | 11. SEC., T., R., M., OR BLK. AND | |
| | 1980' FNL, 660' FWL, Section 7, T25N, R12W | SURVEY OR AREA | |
| | E | Section 7, T25N, R12W | |
| 14. | PERMIT NO. 15. ELEVATIONS (Show whether DF, RT, GR, etc.) | 12. COUNTY OR PARISH 13. STATE | |
| | 6290' GLE | San Juan NM | |
| 16. | Check Appropriate Box To Indicate Nature of Notice, Report, or C | ther Data | |
| | NOTICE OF INTENTION TO: SUBSEQU | ENT REPORT OF: | |
| | TEST WATER SHUT-OFF PULL OR ALTER CASING WATER SHUT-OFF | REPAIRING WELL | |
| | TRACTURE TOP | ALTERING CASING | |
| | PRACTURE TREAT | ABANDONMENT* | |
| | SHOOT OR ACIDIZE | | |
| | REPAIR WELL CHANGE PLANS (Other) (Note: Report results | of multiple completion on Well | |
| | (Other) Convert to water Injection X Completion or Recompl | etion Report and Log form.) | |
| 17. | DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical pertinent to this work.) | including estimated date of starting any l depths for all markers and zones perti- | |

It is proposed to convert this former Lower Gallup sand oil well (presently a Pictured Cliffs gas recompletion) to water injection. The perforations 1340'-47' will be squeezed with 50 sacks cement. The well will be cleaned

out to 4900' and the interval 4880'-86' reperforated with 24~0.41'' holes. A packer will be set on tubing above the injection interval, the perfs stimulated with 1000 gallons 15% HCl acid and the well placed on injection. The casing will be tested and repaired if required prior to injection. Well name will be changed to WI-21. Please find supplemental information attached.

| 8. I hereby certify that the foregoing is true | And correct Petroleum Engine | er DATE 11/15/82 |
|--|--------------------------------------|------------------|
| (This space for Bedern or Sure office use) | TITLE | DATE |
| CONDITIONS OF APPROVAL, IF ANY: | 182 R 1414 TW | 7 |
| DISTRICT ENG | MS *See Instructions on Reverse Side | |

Hixon Development Company Central Bisti Lower Gallup Unit Federal "C" Well No. 2 Supplemental Information

- Name CBU Federal "C" Well No. 2. (Well name to be changed to WI-21). Federal Minerals. Unit area. Refer to attached sundry notice.
- 2. There will be 600 BWPD of water injected into the Lower Gallup perforations 4880'-86'. Source of water is recycled Lower Gallup injection water. Water analysis is attached.
- 3. Water will be injected into the Unitized Lower Gallup sand. This well was shut in as a non-commercial Pictured Cliffs recompletion in October 1975. Because of declining bottom hole pressure in this Unit area the well will be converted to pressure maintenance. It is to be used for secondary recovery operations and not waste water disposal. The Lower Gallup sand is isolated by impermeable Mancos shale above and below. Injection water is confined to the Lower Gallup sand. Cement top is 3900' by temperature survey.
- 4. The injection Lower Gallup interval has oil, gas and previously injected water. The injected fluid is not reactive with the Lower Gallup sand.
- 5. Usable water in this wellbore is to the base of the Ojo Alamo about 130'. Attempts to drill a fresh water utility well in this area have proved the Ojo Alamo to be dry.
- 6. Refer to the attached wellbore diagram.
- 7. Refer to the attached wellbore diagram.
- 8. Refer to sundry notice and wellbore diagram. Anticipated injection pressure is 600 to 1000 psi. An amine-oxygen scavanger packer fluid will be placed in the tubing casing annulus above the packer to surface. Injection pressures will be held to less than fracture pressure.
- 9. The system is and will be monitored with continuous recording pressure charts and rate meters, taking of tubing and casing pressures, tracer surveys if required.

| WELL NAME | Federal "C" No. 2 | | | | |
|---|--|-------------------------------------|--|----------------------------|--|
| LOCATION 198 | 80' FNL, 660' FWL | SECTION | TT | 25N R 12W | |
| CURRENT STA | TUS: | | ······································ | | |
| SURFACE CASING Hole size:12-1/ Casing:8-5/8" Casing set @29/ FORMATION TOP Fruitland Pictured Cliffs Lewis | 1/4'' | | | | |
| Point Lookout Mancos Upper Gallup Lower Gallup | | 1362 | Tubing Pump size Rod string | | |
| PERFORATIONS | 4880'-86' 4919'-25' 4938'-44' 1362' & 1340'-47 (squ | P **** T* | | | |
| | PBD 50121 | 1919'-25' | | | |
| Hole size: 7—1 Casing: 5–1/2" Casing set @ 5049 | 7/8'' | 4938 44' 4970' D 5050' | | san juan repro Form 100-13 | |

san juan testing laboratory, inc.

907 WEST APACHE

P.O. BOX 2079 .

FARMINGTON, NEW MEXICO

PHONE 327-4966

| | Date June 10, 1977 | | | |
|--------------------|---|--|--|--|
| Report to | Hixon Development Company | | | |
| Requested by | A. Kuchera, Mgr. Sampled by Hixon Personnel | | | |
| Project | CBU #5 Location NW NW Sec. 6, T25N, R12W | | | |
| Source of Material | Lower Gallup Produced Water | | | |
| Lab No | 24509 Water Analysis for Petroleum Engineering TEST RESULTS | | | |

WATER ANALYSIS FOR PETROLEUM ENGINEERING

| Constituent Total Solids pH Resistivity Conductivity | 2263 ppm 7.25 2.94 ohms/meter @70°F 3,400 micromhos/cm @ 70°F | Constituents Cations Sodium Calcium Magnesium Iron Barium | Meg/L 29.3 2.3 0.5 neg. 0 | ppm 674 45 6 3 |
|--|--|--|--|------------------------------|
| Comments | | Anions | | |
| Essentially thi sulfate solution | s is a 0.2% sodium n. | Chloride Bicarbonate Carbonate Hydroxide Sulfate | 4.1 4.0 0 , 0 24.0 | 145 244 0 0 1150 |

Copies to Hixon Development Co. (3)

P.O. Box 2810

Farmington, New Mexico 87401

TEST NO. 22096

