

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

SUBMIT IN TRIPLICATE

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other	5. Lease Designation and Serial No. <i>NM 13809</i>
2. Name of Operator <i>MW Petroleum / Apache Corporation 505-325-0318</i>	6. If Indian, Allottee or Tribe Name
3. Address and Telephone No. <i>2855 Southside River Rd. Suite A Farmington, NM 87401</i>	7. If Unit or CA, Agreement Designation <i>Bear Canyon Unit</i>
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) <i>Unit U 2201' FSL, 2059' FEL Sec 10, T26N, R2W</i>	8. Well Name and No. <i>Bear Canyon #9</i>
	9. API Well No. <i>30-039-25614</i>
	10. Field and Pool, or Exploratory Area <i>Gavilan Mancos</i>
	11. County or Parish, State <i>Rio Arriba Co., NM</i>

12. CHECK APPROPRIATE BOX(S) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Abandonment
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Recompletion
<input type="checkbox"/> Final Abandonment Notice	<input checked="" type="checkbox"/> Plugging Back <i>P&A back to Landowner Water Well</i>
	<input type="checkbox"/> Casing Repair
	<input type="checkbox"/> Altering Casing
	<input type="checkbox"/> Other
	<input type="checkbox"/> Change of Plans
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Non-Routine Fracturing
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Conversion to Injection
	<input type="checkbox"/> Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

MW Petroleum / Apache Corporation proposes to Plug and Abandon this well, leaving the wellbore to the Landowner for use a water well. See attached procedures.

RECEIVED
SEP 22 1998
OIL CON. DIV.
DIST. 3

14. I hereby certify that the foregoing is true and correct.

Signed: *[Signature]* Title: *Production Foreman* Date: *8-24-98*

(This space for Federal or State office use)

Approved by: *[Signature]* Title: *Lands and Mineral Resources* Date: *9-17-98*

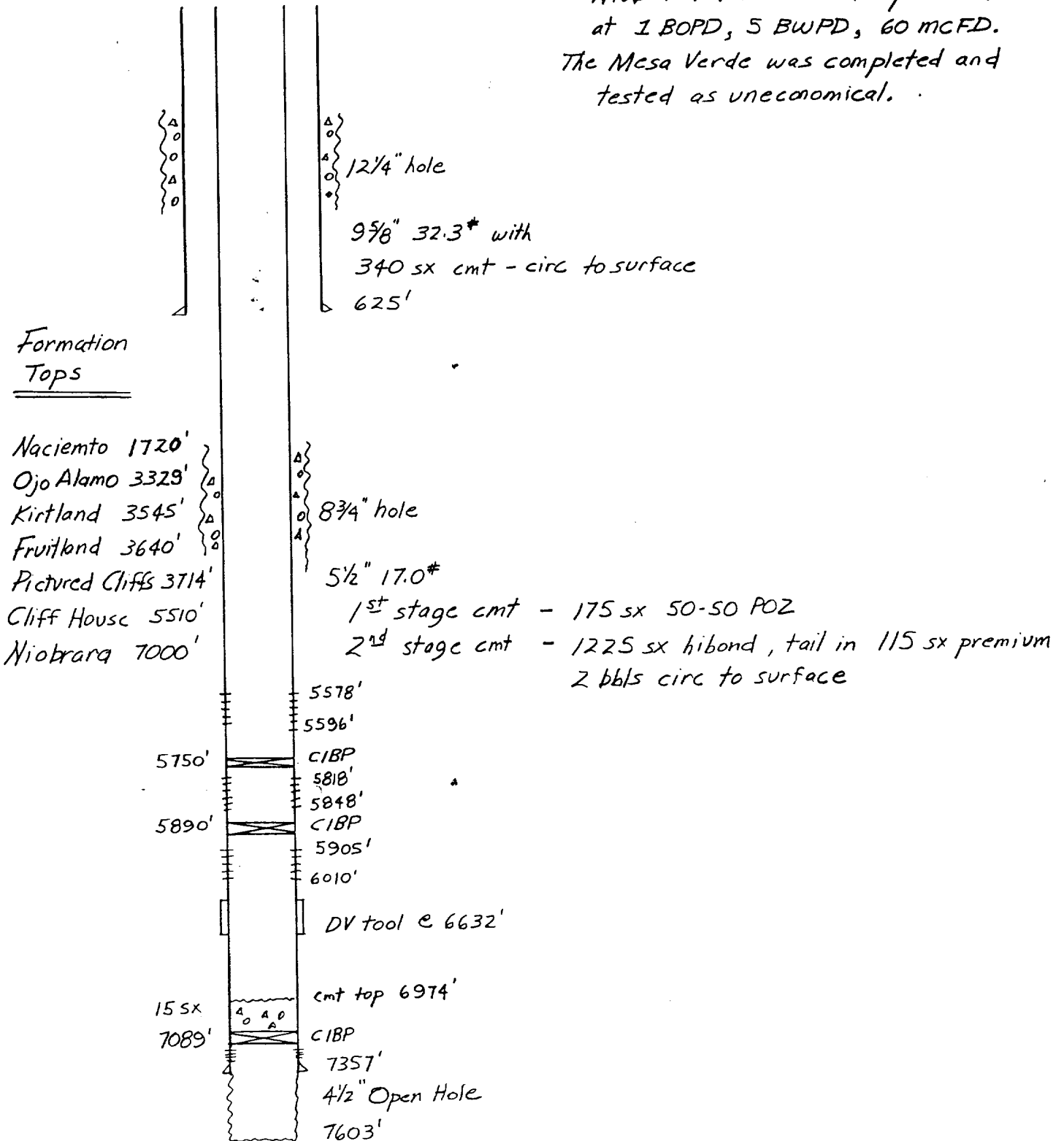
Conditions of approval, if any:

6-30-97

MW Petroleum
Bear Canyon Unit #9
NWSE Sec 10 T26N R2W
Rio Arriba Co., NM

Existing Wellbore Diagram

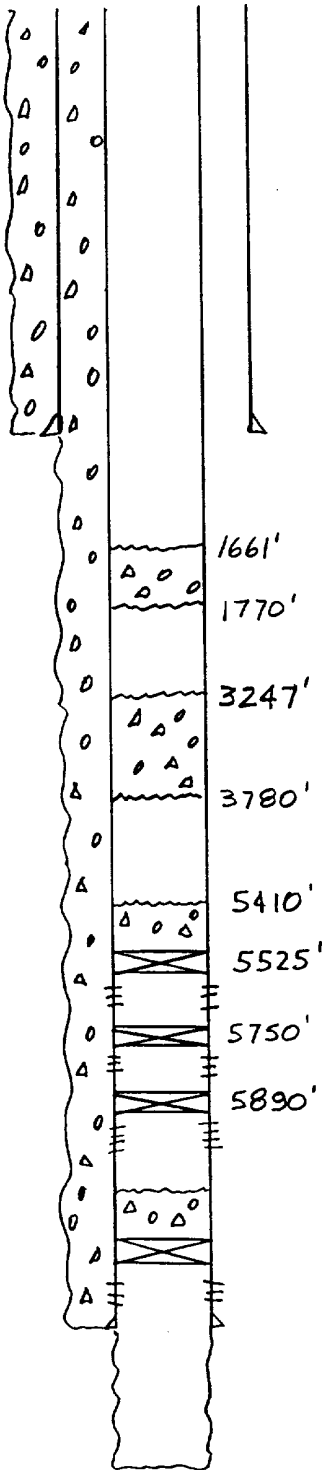
Well was drilled and completed in the Niobrara formation. Fomp tested at 1 BOPD, 5 BWPD, 60 mCFD. The Mesa Verde was completed and tested as uneconomical.



MW Petroleum / Apache Corporation
 Bear Canyon Unit #9
 NWSE Sec 10 T26N R2W
 Rio Arriba Co., NM

8-24-98

Proposed Procedures to P+A Well, leaving the wellbore for a Landowner's Water Well



1. Set a CIBP @ 5525', spot 15 sx (17.7 ft³) class B neat on CIBP. Cover Cliffhouse top @ 5510'.
2. Spot 59 sx (69.6 ft³) from 3780' to 3247' covering from the Ojo Alamo Top to the P.C. Top.
3. Spot 12 sx (14.2 ft³) from 1770' to 1661' covering the Nacimiento Top @ 1720'.
4. Cutoff wellhead, leaving both casings 2' below surface.
5. Turn over wellbore to Jeff Davis-Landowner.

Formation Tops

Nacimiento	1720'
Ojo Alamo	3329'
Kirtland	3545'
Fruitland	3640'
Pictured Cliffs	3714'
Cliffhouse	5510'
Niobrara	7000'

RELEASE AGREEMENT

KNOW ALL MEN BY THESE PRESENTS, that I Jeff Davis,
of the County of Rio Arriba in the State of New Mexico,
am the surface owner of the hereinafter described land upon which a well for
oil or gas was drilled, to wit:

Operator MW Petroleum

Lease Number NM13809

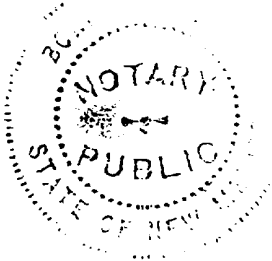
Lessee Bear Canyon Unit

Well No. 9 (NW 1/4 SE 1/4) Sec. 10, Twp. 26W, Rge. 2W.

The well is located 2201 from the South line and
2059 feet from the East line of Sec. 10.

I do hereby notify the Bureau of Land Management of my desire to utilize said
well as a water supply well and I do hereby release and discharge the
operator, lessee, and the Bureau of Land Management from any further work or
responsibility in relation to the plugging of said well.

WITNESS by hand and seal this 25th day of June, 1997.



[Signature]
Surface Owner Jeff Davis

Box 509, LaPlata, NM 87418
Address

IN THE PRESENCE OF: My Commission Expires Dec 14, 2000

Berta Knight Address 304 N. Behrend Farmington, NM
Address _____

APPLICATION TO APPROPRIATE UNDERGROUND WATERS IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

1. Name and mailing address of applicant: File No. SJ-2842

Jeff Davis

P.O. Box 509

Day time phone: # 326-4902

La Plata, NM 87418

2. Describe well location under one of the following subheadings:

a. NW x NW x SE % of Sec. 10 Twp. 26N Rge. 2W NMPL, in Rio Arriba County.

b. X = feet, Y = feet, New Mexico Coordinate System Zone in the Grant.

3. Approximate depth (if known) 7603 feet; outside diameter of casing see #5 inches.

Name of driller (if known) MW Petroleum, 304 N. Behrend Farmington, NM 87401

4. Use of water (check use applied for):

X One household, non-commercial trees, lawn and garden not to exceed one acre.

X Livestock watering.

More than one household, non-commercial trees, lawns and gardens not to exceed a total of one acre.

Drill and test a well intended to be used for domestic, drinking and sanitary or stock water purposes in conjunction with the building or dwelling unit.

Drinking and sanitary purposes and the irrigation of non-commercial trees, shrubs and lawns in conjunction with a commercial operation.

Prospecting, mining or drilling operations to discover or develop natural resources.

Construction of public works, highways and roads.

If any of the last three items were marked, give name and nature of business under Remarks (Item 5).

5. Remarks: Well drilled by MW Petroleum as a test well and is being converted to a water well. It has 9 5/8" casing and 5 1/2" casing. The well is known as Bear Canyon Unit No. 9, NM Oil Conservation Commission Affidavit of Responsibility signed 6-25-97

I, Jeff Davis, affirm that the foregoing statements are true to the best of my knowledge and belief and that development shall not commence until approval of the permit has been obtained.

[Signature], Applicant

By: [Signature]

Date: 9-9-97

ACTION OF STATE ENGINEER

This application is approved for the use indicated, subject to all general conditions and to specific conditions numbered 2 & 4 on the reverse side hereof. This permit will automatically expire unless the well record filed on or before November 15, 1998

Thomas C. Turney, State Engineer

By: Bill Enenbach, Bill Enenbach

Date: December 4, 1997

File No. SJ-2842

STATE ENGINEER OFFICE AZTEC, NEW MEXICO 97 SEP 9 PM 3 54



STATE OF NEW MEXICO
STATE ENGINEER OFFICE

AZTEC

THOMAS C. TURNEY
STATE ENGINEER

100 S. OLIVER, SUITE 100
AZTEC, NEW MEXICO 87410
334-8481

December 4, 1997

Jeff Davis
P O Box 509
La Plata, NM 87418

File SJ-2842

Dear Mr. Davis:

Enclosed is your approved well permit number SJ-2842. This is a 7600 foot deep well drilled for hydrocarbons which is producing water. Note the conditions on the permit under "Action of State Engineer" and on the back of the permit.

General Condition "G" and Specific Condition No. 2 concern wells which are artesian. Regulations on artesian well construction are enclosed. Another condition of this permit is that you shall provide this office with an acceptable plan for reconstructing this well from a hydrocarbon production well or test well into a water well. The well shall be constructed in such a manner that will not allow the commingling of water from the artesian formaton with water in overlying formations.

Also note that a well record must be filed .

Sincerely,

Thomas C. Turney
State Engineer

by:

Bill Enenbach

Bill Enenbach
Water Rights Division

Enclosures noted
xc: Aztec Reading
Groundwater Reading
File
Charles Wohlenberg, SEO

formations encountered during drilling operations. The method and interval of sampling and the quantities required will be specified by the State Engineer.

4-13. **WELL CONSTRUCTION.** Every well shall be constructed with an opening of at least three fourths (¾) inch in diameter in the casing above ground level to allow a measuring line to be inserted between the outside casing and the pump column, in order that the water level in the well may be measured. A removable cap shall be provided for such openings.

4-13.1. **CAPACITY MEASUREMENTS – DISCHARGE PIPE – TURNOUT – APPROVED CAPACITY.** In order that capacity measurements may be made, all pumps other than those connected directly into an underground system shall have a discharge pipe unrestricted for at least five (5) diameters in length from the flange of the pump, elbow, or other obstruction. Those connected to an underground system shall have a turnout at the well into which the entire flow can be diverted with an unrestricted pipe as above. This turnout may be equipped with a valve or removable cap. Flowing wells must be equipped with a discharge pipe as described above and a cap or valve approved by the State Engineer.

4-14. **SHALLOW WELLS--CONSTRUCTION--REPAIR--PLUGGING.** The State Engineer has not adopted any general specifications for the construction, repair, or plugging of non-artesian or shallow wells. Any specific requirements and provisions made by the State Engineer shall be set forth in the permit. Application for Permit to Repair is required for all repair work, cleaning, scaling, deepening, modification of casing, or other work requiring the use of a well rig. Any specific requirements or conditions governing the repair will be set out in the approval of the permit. If plugging is required (Article 2-13), shallow wells shall be plugged by filling to the ground surface or, if the casing is not to be removed, by welding a steel plate or cap to the casing.

4-15. **ARTESIAN WELLS--CONSTRUCTION.** The casing for artesian wells shall be inspected by the State Engineer or his representative and shall meet or exceed the specifications as set forth in 4-15.1. All casing and collars must be in good condition. A standard casing shoe shall be used in all instances. The casing shall not be perforated in a manner that would allow the commingling of water from the artesian formation with water in overlying formations.

4-15.1. **CASING AND COUPLING--API TABLE OF SPECIFICATIONS.** Only threaded casing shall be used. Casings and couplings shall meet minimum American Petroleum Institute (API) specifications for the following sizes:

Outside Diameter Inches	Weight With Couplings (lbs/ft)	Wall Thickness Inches	O.D. Inches	Coupling Length Inches	Threads Per Inch	Grade Of Casing
4½	9.50	0.205	5.000	5	8	F-25
5½	13.00	0.228	6.050	6¾	8	F-25

Outside Diameter Inches	Weight With Couplings (lbs/ft)	Wall Thickness Inches	O.D. Inches	Coupling Length Inches	Threads Per Inch	Grade Of Casing
6	15.00	0.238	6.625	7	8	F-25
6 $\frac{1}{8}$	17.00	0.245	7.390	7 $\frac{1}{4}$	8	F-25
7	17.00	0.231	7.656	7 $\frac{1}{4}$	8	F-25
7 $\frac{1}{8}$	20.00	0.250	8.500	7 $\frac{1}{2}$	8	F-25
8 $\frac{1}{8}$	24.00	0.264	9.625	7 $\frac{1}{4}$	8	F-25
9 $\frac{1}{8}$	29.30	0.281	10.625	7 $\frac{1}{4}$	8	F-25
10 $\frac{1}{4}$	32.75	0.279	11.750	8	8	F-25
11 $\frac{1}{4}$	38.00	0.300	12.750	8	8	F-25
13 $\frac{1}{8}$	48.00	0.330	14.375	8	8	F-25

If casing length exceeds one thousand (1,000) feet, H-grade or better shall be used for thirteen and three-eighths (13 $\frac{3}{8}$) inch casing.

4-15.2. HOLE DIAMETER. In all cases the diameter of the drilled hole shall be at least two (2) inches greater than the outside diameter of the casing.

4-16. CASING—CEMENTING—TESTING. The following specifications shall govern casing, cementing, and testing: the casing shoe shall be welded to the casing to assure proper position. The casing shall be landed on a suitable casing seat in the confining formation overlying the artesian aquifer formation and sufficient oil well cement shall be used to obtain circulation to the surface. When circulation to the surface is not obtained, cement shall be placed to the surface behind the casing. Additives of pozzolanic nature may be used above the casing shoe but shall not exceed fifty per cent (50%) by volume. The addition of calcium chloride and/or gel is permissible but shall not in any case exceed two per cent (2%) each by weight. A sufficient amount of cement without additives shall be used to allow neat cement to seal the casing shoe and rise a minimum of fifty (50) feet above the shoe between the casing and the hole. Cement shall be allowed to set a minimum of forty eight (48) hours before drilling is resumed. Sealing off of the formations shall be checked by a method approved by the State Engineer or his authorized representative.

4-16.1. CEMENTING. Cementing shall be done by the pump and plug method as follows: after the casing has been run and landed, the pump shall be started and mud circulation shall be maintained for at least thirty (30) minutes with the casing raised slightly in order to equalize the mud pressure inside and outside of the casing. A heavy slurry of oil well cement and water shall be mixed and poured into the top of the casing. If additives are used in the slurry, sufficient neat cement (density fifteen (15) pounds per gallon) shall then be added to seal the casing shoe and rise a minimum of fifty (50) feet above the shoe. A casing plug of standard make shall be placed in the casing above the cement and a swedge nipple screwed onto the top of the casing and connected to the mud pump. Then a mud slurry or water shall be pumped into the casing, forcing the cement and casing plug down the casing. A measuring line shall be run behind the plug so that the driller may know its location at all times. When the plug reaches the

point desired above the bottom of the casing, the pump shall be stopped and the casing lowered to the casing seat.

4-17. **CASING, CEMENTING--TESTING--APPROVAL.** The casing, cementing, and testing programs shall be witnessed and approved by an authorized representative of the State Engineer.

4-18. **EXCEPTION TO CASING AND CEMENTING REQUIREMENTS.** In those areas of declared artesian basins where the well is drilled into the artesian aquifer, but no confining formation overlying the artesian formation is present, the foregoing requirements for casing and cementing are not applicable and may be altered by receiving written approval of the State Engineer or his representative.

4-19. **ARTESIAN WELLS--REPAIR.** Before repairs are commenced the well shall first be inspected by a representative of the State Engineer to determine if the condition of the well is such that it may be repaired. When leaks in the casing are found and the casing and well are otherwise in good condition, the well may be repaired by a method approved by the State Engineer. A packer or bridge plug approved by the State Engineer shall be used in all well repairs. An inspection shall be made at the completion of the work to determine if the repair was satisfactory. During each inspection, the hole shall be open to allow the entrance of equipment for well logging and leakage measurement.

4-19.1. **PLUGGING.** If an artesian well is to be replaced by a new well, it shall be plugged immediately following the completion of the new well. All the work shall be done under the supervision of the State Engineer or his representative, or a representative of the appropriate Artesian Conservancy District who shall designate the amount of cement to be used and the depths at which cement plugs shall be set.

4-20. **TEST OR EXPLORATORY WELLS.** All test or exploratory wells shall be so constructed, maintained, and operated that each water shall be confined to the aquifer in which it is encountered. All test or exploratory wells penetrating artesian aquifers shall be cased, cemented, and tested as required for the construction of artesian wells (Article 4-15 through 4-18) and the casing shall be landed in the formation underlying the deepest artesian aquifer and cemented through all known artesian aquifers. The casing, as referred to in the artesian well specifications, is designated as the water protection string by the oil industry. If conductor pipe is used, it shall not be removed until after cementing of the casing has been completed. All casing, cementing, and testing programs shall be witnessed and approved by a representative of the State Engineer.

4-20.1. **SHOTHOLES--PENETRATION.** Shotholes for geophysical exploration shall not penetrate closer than twenty-five (25) feet above any known artesian aquifer under confinement.

4-20.2. ABANDONMENT--PLUGGING. In the event that the test or exploratory well is to be abandoned, the State Engineer shall be notified. Such well shall be plugged in accordance with Article 4-19.1 so that the fluids will be permanently confined to the specific strata in which they were originally encountered.

4-21. MINE LODE DISCOVERY AND DRILL HOLES. Any person drilling a mine lode discovery or mine drill hole to a depth of ten (10) feet or more, who shall encounter or whose drill shall cut into a water body or water bearing strata, shall plug or otherwise construct, maintain, and operate such holes so that any water encountered is permanently confined to the aquifer in which it is found.

4-21.1. DISCOVERY REPORT--FORMS--TIME FOR FILING. Such person, within ninety (90) days from the date of the discovery, shall report to the State Engineer, on forms provided by the State Engineer, the location and depth of the hole, and the method and material used in plugging the hole. If the hole is not plugged, the report shall describe the manner in which it was constructed and is being maintained and operated. The report shall include a log of the hole which is adequate to permit a determination of whether the plugging or construction and operation and maintenance of the drill hole are satisfactory.

4-21.2. ARTESIAN WATER. If artesian water is encountered, the construction, operation, maintenance, or plugging shall be done in accordance with Articles 4-15 through Articles 4-19-1.

4-22. DEVIATIONS FROM SPECIFICATIONS--APPROVAL. Any deviations from the above described casing, cementing, and testing programs must be approved by the State Engineer.