

Energy and Minerals Department Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501

Case 93/8

Fuleway

Re:

Cactus Queen Unit

Chaves County, New Mexico

Gentlemen:

Enclosed for filing, please find three copies of the Application of Yates Drilling Company for Approval of a Secondary Recovery Unit Agreement, and for the Compulsory Unit Operation of a Pool, Cactus Queen Unit Area, Chaves County, New Mexico. Also enclosed are three copies of Form C-108, Application for Authorization to Inject for the Purpose of Secondary Recovery.

We ask that this matter be set for hearing before an Examiner on March 2, 1988.

Thank you.

Sincerely yours,

DICKERSON, FISK & VANDIVER

Chad Dickerson

CD:pvw Enclosures

cc w/enclosure: Ms. Kathy Colbert

BEFORE THE OIL CONSERVATION DIVISION

OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF YATES DRILLING COMPANY FOR APPROVAL OF A SECONDARY RECOVERY UNIT AGREEMENT, AND FOR THE COMPULSORY UNIT OPERATION OF A POOL, CACTUS QUEEN UNIT AREA, CHAVES COUNTY, NEW MEXICO

CASE NO. 9318

APPLICATION

:

COMES NOW Yates Drilling Company, by its attorneys, pursuant to \$70-7-1, et seq., N.M.S.A. (1978), and requests that the Division enter an order for the compulsory unit operation of a pool, and in support hereof, respectfully states:

 Applicant is the operator of a portion of the following lands in Chaves County, New Mexico:

Township 12 South, Range 31 East, N.M.P.M.

Section 26: SW/4 SW/4

Section 27: SE/4, E/2 SW/4, SW/4 SW/4

Section 34: N/2 NE/4, SE/4 NE/4, N/2 NW/4

Section 35: NW/4 NW/4

containing 560 acres, more or less.

- 2. The Applicant seeks to commit the above described lands to a secondary recovery unit known as the Cactus Queen Unit. The unit consists of federal, state and fee lands.
- 3. A plat of the proposed unit area is submitted herewith. The formation proposed to be unitized is defined as that

interval underlying the unit area, the vertical limits of which extend from an upper limit described as the top of the Queen formation to a lower limit as the base of the Queen formation; the geologic markers having been previously found to occur at 2,980 feet and 3,100 feet, respectively, in the Yates Drilling Company's Doyal No. 1, located 660 feet from the north line and 990 feet from the east line of Section 34, Township 12 South, Range 31 East, N.M.P.M.

- 4. The reservoir involved in the application has been reasonably defined by development.
- 5. Yates Drilling Company, as operator, proposes to conduct a secondary recovery program for the unit area, consisting of injection of water under pressure, for the recovery of oil and gas.
- 6. Three copies of Form C-108, Application for Authorization to Inject for the Purpose of Secondary Recovery are filed herewith.
- 7. Three copies of the proposed Unit Agreement covering the manner in which the unit will be supervised and managed, and costs allocated and paid, which the Applicant considers fair, reasonable and equitable, are filed herewith.
- 8. The unitized management, operation and further development of the oil or gas pool is reasonably necessary in order to effectively carry on secondary recovery operations to

substantially increase the ultimate recovery of oil and gas from the pool or the unitized portion thereof.

- 9. That secondary recovery methods of operations as applied to such pool or portion thereof are feasible, will prevent waste and will result with reasonable probability in the increased recovery of substantially more oil and gas from the pool or unitized portion thereof than would otherwise be recovered.
- 10. That the estimated additional costs, if any, of conducting such operations will not exceed the estimated value of the additional oil and gas so recovered, plus a reasonable profit.
- 11. That such unitization and adoption of such unitized methods of operation will benefit the working interest owners and royalty owners of the oil and gas rights within the pool or portion thereof directly affected.
- 12. That the operator has made a good faith effort to secure voluntary unitization within the pool or portion thereof directly affected.
- 13. That the participation formula contained in the unitization agreement allocates the produced and saved unitized hydrocarbons to the separately owned tracts in the unit area on a fair, reasonable and equitable basis.
- 14. The ratification or approval of operator's plan of operation by the owners required to so ratify by \$70-7-8,

N.M.S.A. (1978), and by the Commissioner of Public Lands of the State of New Mexico, and the United States Bureau of Land Management, will be forthcoming prior to the effective date of any order issued pursuant to this application by the Division.

WHEREFORE, Applicant prays that this matter be set for hearing and, upon hearing, the Division enter its order approving operator's proposed secondary recovery project, and approving the unit agreement for compulsory unit operation of the Cactus Queen Unit hereinabove defined, within the vertical limits hereinabove set forth, making provision for the matters prescribed by \$70-7-7 and \$70-7-8, N.M.S.A. (1978), and for such other and further relief as to the Division seems proper.

YATES DRILLING COMPANY

By: Chad Dickerson

DICKERSON, FISK & VANDIVER Seventh and Mahone, Suite E Artesia, New Mexico 88210 (505) 746-9841

Attorneys for Applicant

STATE OF NEW MEXICO EWERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

POST OFFICE BOX TONG STATE LAND OFFICE HIRLDING BANTA FE, NEW MEXICO 8/501

FORM C-108 Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

	-		
Ι.	Purpose: Applicat	Secondary Recovery Pressure Maintenance Disposal Storage ion qualifies for administrative approval? Dyes X no	
11.	Operator:	Yates Drilling Company	
	Address:	105 South 4th Street, Artesia, New Mexico 88210	
	Contact par	ty: <u>Tobin L. Rhodes</u> <u>Phone: (505) 746-9889</u>	
111.	Well data:	Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.	
IV.		expansion of an existing project? yes x no c the Division order number authorizing the project	
ν.	Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.		
VI.	Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.		
VII.	Attach da t a	on the proposed operation, including:	
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.). 		
V111.	detnil, geo bottom of a total disso	opriate geological data on the injection zone including appropriate lithological name, thickness, and depth. Give the geologic name, and depth to lithological name, and solids concentrations of 10,000 mg/l or less) overlying the proposed one as well as any such source known to be immediately underlying the	

- injection zone as well as any such source known to be immediately underlying the injection interval.
 - IX. Describe the proposed stimulation program, if any.
 - Attach appropriate logging and lest data on the well. (If well logs have been filed Χ. with the Division they need not be resubmitted.)
 - Attach a chemical analysis of fresh water from two or more fresh water wells (if XI. available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
- XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground cource of drinking water.
- XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.
- XIV. Certification

I hereby certify that the information submitted with this application is true and correct

to the best of my knowledge and belief.	
Name: Tobin L. Rhodes	Title Petroleum Engineer
Signature: Take L. Khok	Date: 1-7-88
If the information required under Sections VI, VI submitted, it need not be duplicated and resubmit of the earlier submittal.	·

111. WELL DATA

- A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:
 - Lease name; Well No.; location by Section, Township and Range; and footage location within the section.
 - (2) Each casing string used with its size, setting "depth, sacks of cement used, hale size, top of cement, and how such top was determined.
 - (3) A description of the tubing to be used including its size, lining material, and setting depth.
 - (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

- B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.
 - (1) The name of the injection formation and, if applicable, the field or pool name.
 - (2) The injection interval and whether it is perforated or open-hole.
 - (3) State if the well was drilled for injection or, if not, the original purpose of the well.
 - (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
 - (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a-proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

OIL CONSERVATION DIVISION FORM C-108 (Supplement)

Application of Yates Drilling Company For a Secondary Recovery Project (Proposed Cactus Queen Unit) Chaves County, New Mexico

I. Purpose:

Application is made for authorization to inject water into the Queen formation within the boundaries of the proposed Cactus Queen Unit. The proposed unit consists of 560 acres and lies in Sections 26,27,34 and 35 of Township 12 South, Range 31 East, Chaves County, New Mexico. This project would be classified as a secondary recovery project with the objective of recovering hydrocarbons that will not be recovered by primary means.

The reservoir as defined is near primary depletion. Our studies show that a five-spot injection pattern with six injection wells and six producing wells will result in recovery of oil in economic quantities not otherwise recoverable. Such a pattern will utilize eleven existing wells and will initially require the drilling of one additional well.

II. Operator:

Yates Drilling Company 105 South Fourth Street Artesia, New Mexico 88210

Phone Number: (505) 746-9889

III. Injection Well Data:

A well data sheet is attached for each of the six wells proposed for injection. Each injection well data sheet includes a downhole schematic of how each individual well will be configured if this application is approved.

IV. Existing Project:

The proposed project is not an expansion of an existing project and will be a totally new project.

V. Ownership:

A lease ownership map is attached which identifies all wells and lease ownership within two miles of any of the six proposed injection wells. A one-half mile radius circle has been drawn around each of the injection wells on the second map to identify the unit's area of review.

VI. Well Data:

There are seventeen wells including the proposed injection wells which fall within the area of review. Two of these wells have been plugged and abandoned, one well is temporarily abandoned, and the remaining fourteen wells are active "Queen" producers. Available data for each of the seventeen well is included in attached well data sheets. Additionally a downhole schematic has been drawn depicting each of the two plugged and abandoned wells.

VII. Project Data:

- 1. The proposed daily injection rate is approximately 200 barrels per day for each of the six proposed injection wells. Total injection for the unit would be 1200 barrels per day. The maximum injection rate for any one well will be based on fracture pressures as determined from proposed step rate test to be conducted on each injection well.
- 2. Produced water will be stored in existing open top fiberglass tanks until transferred to a covered steel storage tank, therefore the water system will be open until the water is transferred to the steel storage tank. Any fresh water will be stored in a covered and sealed steel tank. Produced oil will immediately be separated from produced water and stored in steel, covered, production tanks until sold.
- 3. Initially the injection wells may take water on a vacuum, but as the reservoir begins to fill, a positive surface injection pressure will be required to inject water. The maximum injection pressure will also be based on proposed step rate tests.
- 4. The source of injection fluid will be produced water from producing wells within the unit and fresh water from an existing "Ogollala" well in the area. No commitment has been made but there are at lease two water wells nearby that are capable of producing water in the amounts required. The State Engineer's Office

in Roswell has indicated commercial water rights are available in this area.

5. No water compatibility problems are expected as "Ogollala" water has been injected into the Queen formation for years, throughout the Caprock Queen field, without excessive problems.

VIII.Geologic Data:

The proposed Cactus Queen Unit produces from the upper sandstone member of the Queen formation, Upper Guadalupian series, Permian System. The average producing depth in the field is 2989 feet. The existing producing formation will be the interval into which water will be injected.

The productive/injection interval, as indicated from a whole core analysis on the DeLuna Federal #3 (330' FNL & 1980' FEL, 34-12s-34e) and sidewall core data from numerous wells, is fine grained, friable, gray, quartz sandstone. The grains are sub-angular to sub-rounded and well sorted. The cementing material is variously from anhydrite and dolomite. The exact depositional environment is unknown. Porosity and permeability are intergranular in nature. The sandstone is naturally fractured.

The Cactus Queen Field is a stratigraphic trap. Cementation of the sandstone results in the loss porosity and permeability, creating a barrier on all sides with the exception of the east. Α tilted limits the oil/water contact production in that direction. The oil/ water has been established at (+1440) in the southeast end of the field and (+1446)at the northeast edge.

fresh water in this area is The underground source of the Ogollala formation of Tertiary age, the base of which is estimated to be 300 feet below the surface. This aquifer is behind the surface pipe and cement of all existing wells in the unit area. The Chinlee formation is also a fresh water aguifer which immediately underlies the Ogollala formation. The base of the Chinlee is estimated to be approximately 500 feet below the surface in the unit area. The Chinlee Aguifer is behind the production casing in all existing wells in the unit area.

IX. Stimulation Program:

Each of the eleven existing wells has previously received a fracture treatment. The details of each of these treatments are outlined in the data sheet for each individual well. There are no plans to stimulate any of the existing wells which will be producing wells in this project. The proposed new producing well will require a fracture treatment which will be similar to currently existing wells' initial fracture treatment.

The wells which will be injection wells may require a small "cleanup" acid job prior to injection. We plan to treat each of these six well with a 1000 to 2000 gallon treatment of 15% hydrochloric acid. This treatment should insure that existing perforations in a well are open and that each well will accept water at the lowest possible pressure.

X. Well Logs:

Well logs for each of the existing well in the proposed unit have previously been submitted to the Hobbs office of the NMOCD. Logs obtained on a new well will also be submitted to the Hobbs office when these logs become available.

XI. Fresh Water:

The State Engineer's Office in Roswell has record of seven water wells within one mile of the proposed unit. The total depths of four of the seven wells are unknown, however all seven wells are assumed to be producing from the Ogollala formation. Analysis reports for water taken from three of the seven wells are attached.

XII. Injection Zone Isolation:

Available engineering and geological data has been examined and no evidence of open faulting or any other hydrologic connection between the disposal zone and any underground source of drinking water has been found.

XIII. Proof of Notice:

A listing of off-set leasehold operators, surface owners, royalty owners, overriding royalty owners, and working interest owners that have received a copy of this application by certified mail is attached.

XIV. Certification:

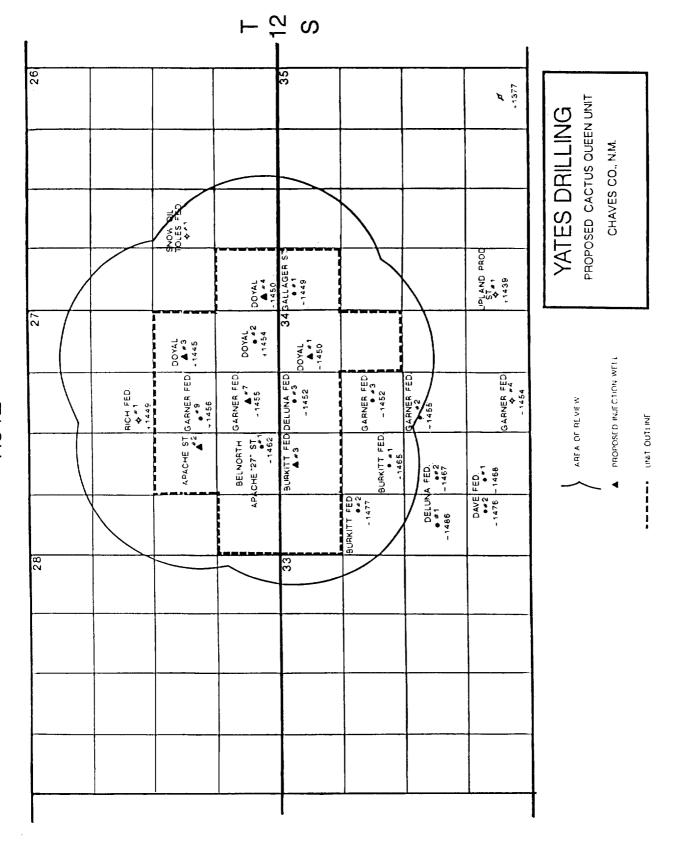
I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Tobin L. Rhodes

Petroleum Engineer

January 7, 1988

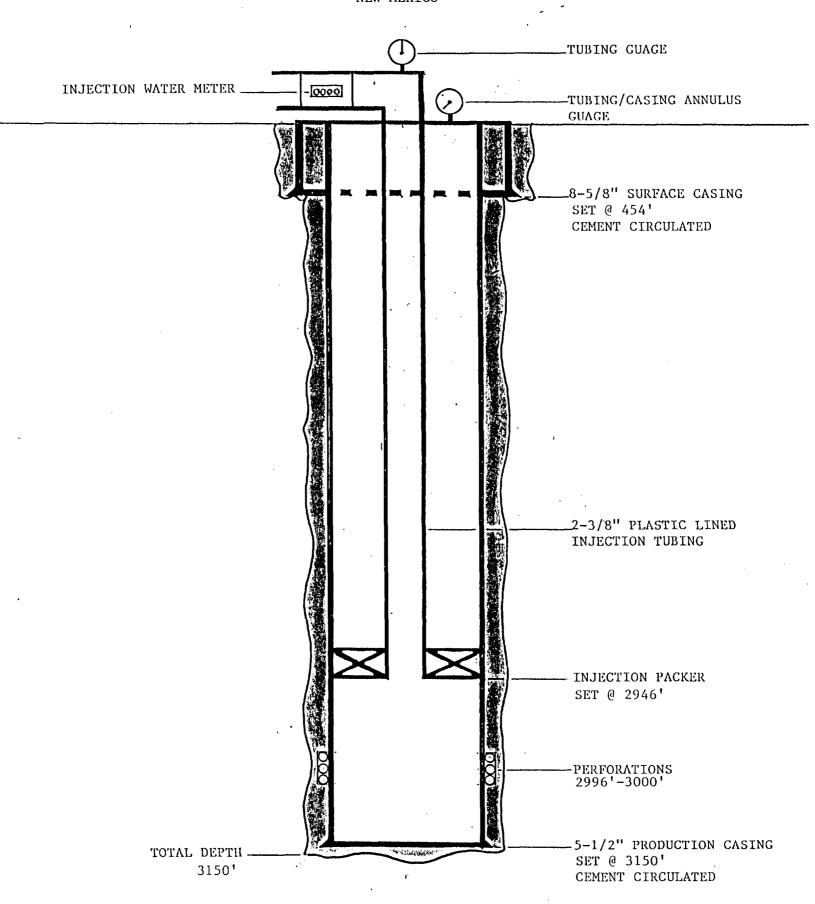
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INJECTION WELL DATA SHEET

OPERA	TOR: Engon Oil & Gas Co. LEASE: Apache "27" State
	NO.: 2 FOOTAGE: 1650 FSL 2310 FEL SEC: 27-112s-831s
	TUBULAR DATA
SURF	NCE CASING
TOC:	B-5/8" 24# CEMENTED WITH: SX. Surface FEET DETERMINED BY: Ulriculation SIZE: 12-1/4" SETTING DEPTH: 454
INTER	RMEDIATE CASING
SIZE: TOC:_ HOLE	None CEMENTED WITH: SX. FEET DETERMINED BY: SIZE: SETTING DEPTH:
ГОИО	STRING
TOC:_ HOLE	4-1/2" CEMENTED WITH: SX. Surface FEET DETERMINED BY: Circulation SIZE: 7-7/8" SETTING DEPTH: 3150' DEPTH: 3150'
INJEC	CTION INTERVAL
	2996 FEET TO 30001 FEET - PERFORATED
TUBIN	NG
TUBIN	NG SIZE: 2-3/8" LINED WITH: Plastic SET IN A PACKER AT: 2946 FEET
	OTHER DATA
1.	NAME OF INJECTION FORMATION: Queen
2.	NAME OF FIELD OR FOOL (IF APPLICABLE): SE Chayes Queen
3.	IS THIS A NEW WELL DRILLED FOR INJECTION? No. IF NO.FOR WHAT PURPOSE WAS THE WELL ORIGINALLY DRILLED? This well was drilled as a Gueen producing well.
4.	HAS WELL EVER BEEN PERFORATED IN ANY OTHER ZONE(S)? No LIST ALL SUCH PERFORATED INTERVALS AND GIVE PLUGGING DETAILS (SACKS OF CEMENT OR BRIDGE PLUG(S) USED):
ROT IN	GIVE DEPTH TO AND NAME OF ANY OVERLYING AND/OR UNDERLYING OIL OR GAS ZONES (POOLS) IN THIS AREA: Mone known.

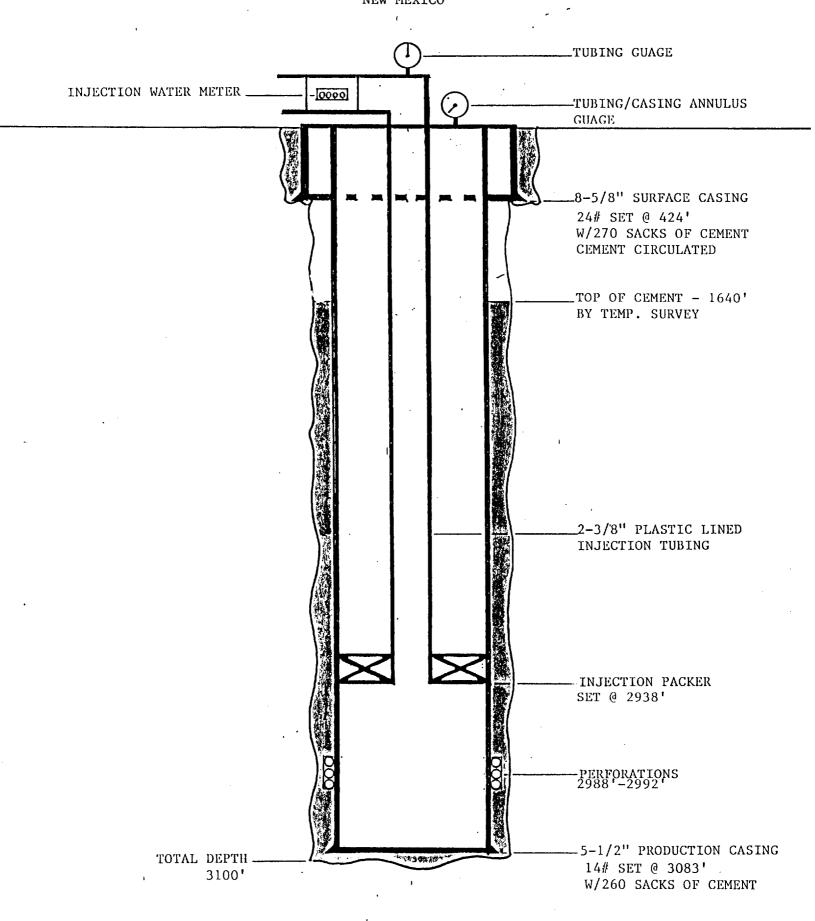
APACHE "27" STATE # 2 1650' FSL & 2310' FEL SECTION 27-T12S-R31E CHAVES COUNTY NEW MEXICO



INJECTION WELL DATA SHEET

OPERA	ATOR: Yates Drilling Co. LEASE: Burkitt Federal
	NO.: 3 FOOTAGE: 330/FNL-2310/FWL SEC: 34-T12s-R31e
	TUBULAR DATA
SURFA	ACE CASING
TOC:	8-5/8" 24# CEMENTED WITH: 270 SX. Surface FEET DETERMINED BY: Circulation SIZE: 12-1/4" SETTING DEPTH: 424
INTER	RMEDIATE CASING
SIZE: TOC:_ HOLE	CEMENTED WITH: 5X. FEET DETERMINED BY: SIZE: SETTING DEPTH:
LONG	STRING
TOC:	S-1/2" 14# CEMENTED WITH: 260 SX. 1640' FEET DETERMINED BY: Temp. Survey SIZE: 7-7/8" SETTING DEPTH: 3083' DEPTH: 3100'
INJE	CTION_INTERVAL
	29881 FEET TO 29921 FEET - PERFORATED
TUBI	чG
TUBIN	NG SIZE: 2-3/8" LINED WITH: <u>Plastic</u> SET IN A er AD-1 PACKER AT: 2938' FEET
	OTHER DATA
1.	NAME OF INJECTION FORMATION: Queen
21.	NAME OF FIELD OR POOL (IF APPLICABLE): SE Chaves Queen
3.	IS THIS A NEW WELL DRILLED FOR INJECTION? NO. IF NO, FOR WHAT PURPOSE WAS THE WELL ORIGINALLY DRILLED? This well was drilled as a Queen producing well.
4.	HAS WELL EVER BEEN PERFORATED IN ANY OTHER ZONE(S)? No LIST ALL SUCH PERFORATED INTERVALS AND GIVE PLUGGING DETAILS (SACKS OF CEMENT OR BRIDGE PLUG(S) USED):
e:: □ •	GIVE DEPTH TO AND NAME OF ANY OVERLYING AND/OR UNDERLYING OIL OR GAS ZONES (POOLS) IN THIS AREA: None known.

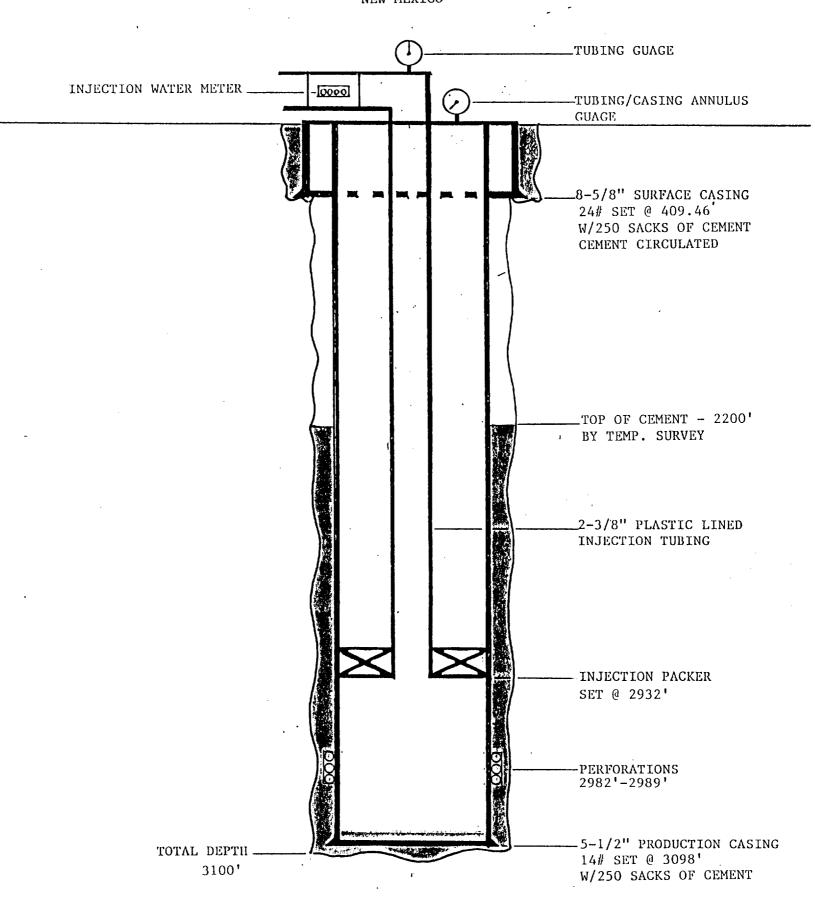
BURKITT FEDERAL #3
330' FNL & 2310' FWL
SECTION 34-T12S-R31E
CHAVES COUNTY
NEW MEXICO



INJECTION WELL DATA SHEET

	ATOR: Yates Drilling Co. LEASE: Doyal
	NO.: 1 FOOTAGE: <u>660'FNL- 990'FEL</u> SEC: <u>34-T12s-R31e</u>
	TUBULAR DATA
SURFA	ACE CASING
SIZE: TOC:_ HOLE	8-5/8" 24# CEMENTED WITH: 250 SX. Surface FEET DETERMINED BY: Circulation SIZE: 12-1/4" SETTING DEPTH: 409.46
INTER	RMEDIATE CASING
TOU:	None CEMENTED WITH: SX. FEET DETERMINED BY: SIZE: SETTING DEPTH:
LONG	STRING
HOLE	5-1/2" 14# CEMENTED WITH: 250 SX. 2200' FEET DETERMINED BY: Temp. Survey SIZE: 7-7/8" SETTING DEPTH: 3100'
	CTION INTERVAL
	29821 FEET TO 29891 FEET - PERFORATED
TUBIN	4G
TUBIN Bake	NG SIZE: <u>2-3/8" LINED WITH: Plastic</u> SET IN A er AD-1 PACKER AT: <u>2932'</u> FEET
	OTHER_DATA
1.	NAME OF INJECTION FORMATION: Queen
2.	NAME OF FIELD OR POOL (IF APPLICABLE): SE Chaves Queen
3.	IS THIS A NEW WELL DRILLED FOR INJECTION? No IF NO, FOR WHAT PURPOSE WAS THE WELL ORIGINALLY DRILLED? This well was drilled as a Queen producing well.
4.	HAS WELL EVER BEEN PERFORATED IN ANY OTHER ZONE(S)? No LIST ALL SUCH PERFORATED INTERVALS AND GIVE PLUGGING DETAILS (SACKS OF CEMENT OR BRIDGE PLUG(S) USED):
5.	GIVE DEPTH TO AND NAME OF ANY OVERLYING AND/OR UNDERLYING OIL OR GAS ZONES (POOLS) IN THIS AREA: None known.

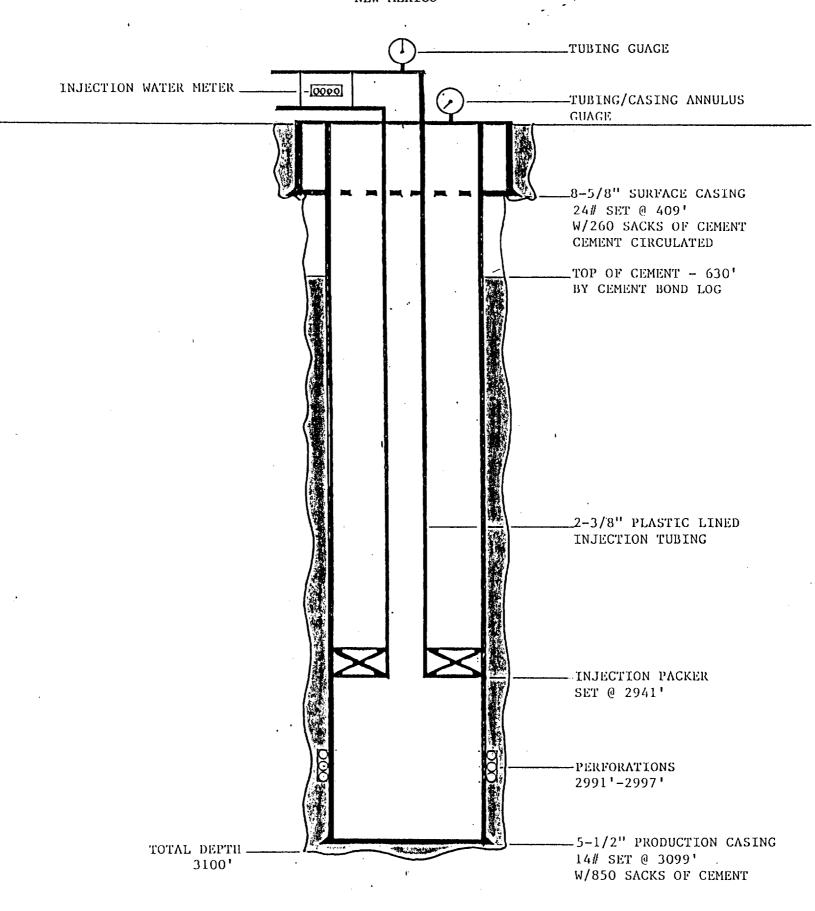
DOYAL #1
660' FNL & 990' FEL
SECTION 34-T12S-R31E
CHAVES COUNTY
NEW MEXICO



INJECTION WELL DATA SHEET

OPERATOR: Yates Drilling Co. LEASE: Doyal
WELL NO.: 3 FOOTAGE: 1980 FSL - 990 FEL SEC: 27-112s-631e
TUBULAR_DATA
SURFACE CASING
SIZE: 8-5/8" 24# CEMENTED WITH: 260 SX. TOC: Surface FEET DETERMINED BY: Circulation HOLE SIZE: 12-1/4" SETTING DEPTH: 4097
INTERMEDIATE_CASING
SIZE: None CEMENTED WITH: SX. TOC: FEET DETERMINED BY: HOLE SIZE: SETTING DEPTH:
LONG STRING
SIZE: 5-1/2" 14# CEMENTED WITH: 850 SX. TOC: 630' FEET DETERMINED BY: Cement Bond Log HOLE SIZE: 7-7/8" SETTING DEPTH: 3099' TOTAL DEPTH: 3100'
INJECTION_INTERVAL
2991' FEET TO <u>2997'</u> FEET - PERFORATED
TUBING
TUBING SIZE: 2-3/8" LINED WITH: Plastic SET IN A Baker AD-1 FACKER AT: 2941' FEET
OTHER DATA
1. NAME OF INJECTION FORMATION: Queen
2. NAME OF FIELD OR POOL (IF APPLICABLE): SE Chaves Queen
3. IS THIS A NEW WELL DRILLED FOR INJECTION? No IF NO, FOR WHAT PURPOSE WAS THE WELL ORIGINALLY DRILLED? This well was drilled as a Queen producing well. This well is temp. aban. due to high water production
4. HAS WELL EVER BEEN PERFORATED IN ANY OTHER ZONE(S)? No LIST ALL SUCH PERFORATED INTERVALS AND GIVE PLUGGING DETAILS (SACKS OF CEMENT OR BRIDGE PLUG(S) USED):
5. GIVE DEPTH TO AND NAME OF ANY OVERLYING AND/OR UNDERLYING OIL OR GAS ZONES (POOLS) IN THIS AREA: None known.

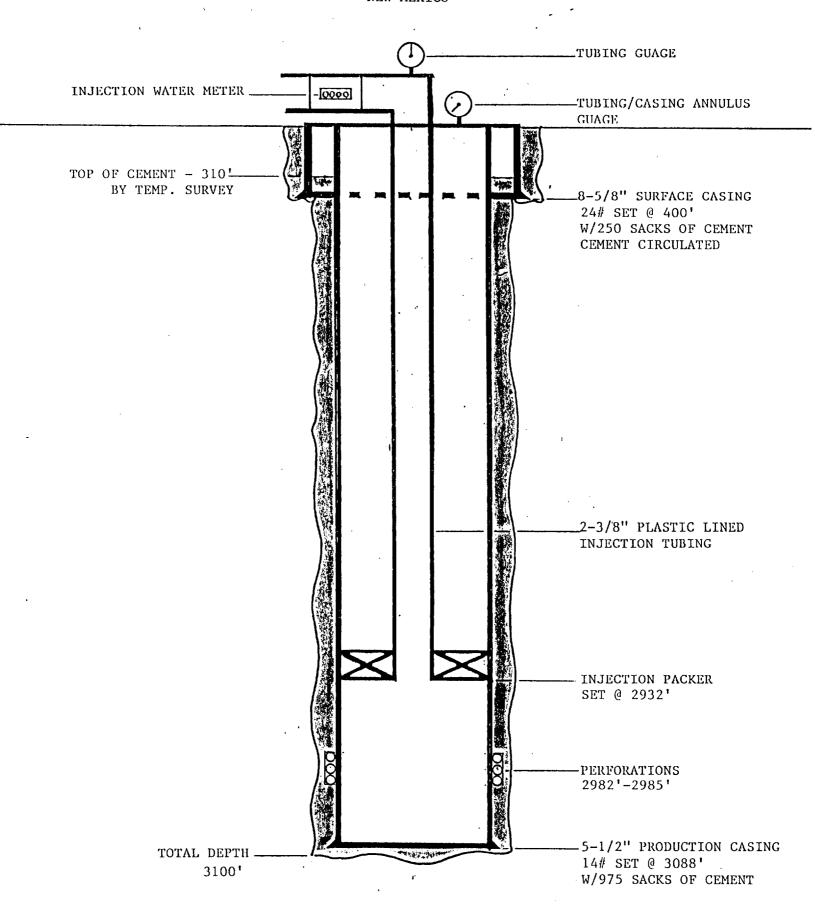
DOYAL #3
1980' FSL & 990' FEL
SECTION 27-T12S-R31E
CHAVES COUNTY
NEW MEXICO



INJECTION WELL DATA SHEET

OPERA	ATOR: Yates Drilling Co. LEASE: Doyal
WELL	NO.: 4 FOOTAGE: 330'FSL- 330'FWL SEC: 26-T12s-R31e
	TUBULAR_DATA
SURFA	ACE CASING
SIZE: TOC: HOLE	SIZE: 12-1/4" CEMENTED WITH: 250 SX. SUCTION SETTING DEPTH: 400
INTER	RMEDIATE_CASING
SIZE: TOC: HOLE	CEMENTED WITH: SX. FEET DETERMINED BY: SIZE: SETTING DEPTH:
LONG	STRING
TOC:	CEMENTED WITH: 975 SX. 310' FEET DETERMINED BY: Temp. Survey SIZE: 7-7/8" SETTING DEPTH: 3088' DEPTH: 3100'
	CTION INTERVAL
	2982' FEET TO 2985' FEET - PERFORATED
TUBII	
TUBII	NG SIZE: 2-3/8" LINED WITH: Plastic SET IN A er AD-1 PACKER AT: 2932' FEET
	OTHER DATA
1.	NAME OF INJECTION FORMATION: Queen
2.	NAME OF FIELD OR POOL (IF APPLICABLE): SE_Chaves Queen_
3.	IS THIS A NEW WELL DRILLED FOR INJECTION? No IF NO, FOR WHAT PURPOSE WAS THE WELL ORIGINALLY DRILLED? This well was drilled as a Queen producing well.
4.	HAS WELL EVER BEEN PERFORATED IN ANY OTHER ZONE(S)? No LIST ALL SUCH PERFORATED INTERVALS AND GIVE PLUGGING DETAILS (SACKS OF CEMENT OR BRIDGE PLUG(S) USED):
5.	GIVE DEPTH TO AND NAME OF ANY OVERLYING AND/OR UNDERLYING OIL OR GAS ZONES (POOLS) IN THIS AREA: None known.

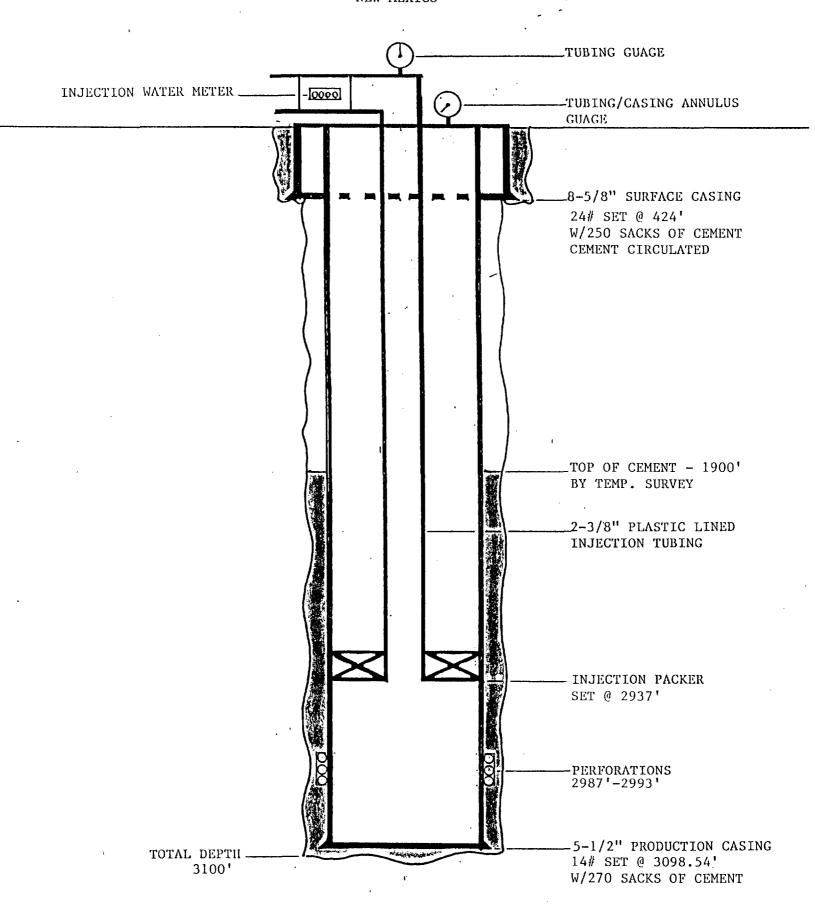
330' FSL & 330' FWL SECTION 26-T12S-R31E CHAVES COUNTY NEW MEXICO



INJECTION WELL DATA SHEET

OPERA	TOR: Yates Drilling Co. LEASE: Garner Federal
WELL	NO.: 7 FOOTAGE: <u>660'FSL-1980'FEL</u> SEC: <u>27-T125-R31e</u>
	TUBULAR DATA
SURFA	CE_CASING
SIZE: TOC:_ HOLE	8-5/8" 24# CEMENTED WITH: 250 SX. Surface FEET DETERMINED BY: Circulation SIZE: 12-1/4" SETTING DEPTH: 424
INTER	MEDIATE CASING
TOC:	None CEMENTED WITH: SX. FEET DETERMINED BY: SIZE: SETTING DEPTH:
LONG	STRING
TOC:	5-1/2" 14# CEMENTED WITH: 270 SX. 1900' FEET DETERMINED BY: Temp. Survey SIZE: 7-7/8" SETTING DEPTH: 3098.54' DEPTH: 3100'
INJEC	TION INTERVAL
J	2987' FEET TO 2993' FEET - PERFORATED
TURIN	IG
TUBIN	AG SIZE: 2-3/8" LINED WITH: Plastic SET IN A Pr AD-1 PACKER AT: 2937' FEET
	OTHER DATA
1.	NAME OF INJECTION FORMATION: Queen
2.	NAME OF FIELD OR POOL (IF APPLICABLE): SE Chayes Queen_
3.	IS THIS A NEW WELL DRILLED FOR INJECTION? No. IF NO, FOR WHAT PURPOSE WAS THE WELL DRIGINALLY DRILLED? This well was drilled as a Queen producing well.
4.	HAS WELL EVER BEEN PERFORATED IN ANY OTHER ZONE(S)? No_LIST ALL SUCH PERFORATED INTERVALS AND GIVE PLUGGING DETAILS (SACKS OF CEMENT OR BRIDGE PLUG(S) USED):
5.	GIVE DEPTH TO AND NAME OF ANY OVERLYING AND/OR UNDERLYING OIL OR GAS ZONES (POOLS) IN THIS AREA: _None known.

GARNER FEDERAL # 7 660' FSL & 1980' FEL SECTION 27-T12S-R31E CHAVES COUNTY NEW MEXICO



OPERATOR: <u>Enron Oil & Gas Co.</u>	LEASE: Apache "27" State
1/14 × 1/14 / 1/	FSL-2310'FWL SEC: 27-T12s-R31e
	nn ann pag gar ann agu ann ann ann ann agu ant teon tìre ann ann ath thin ann ann ath thit aire ann ann ath thin ant ann ann thin tab tar are
TUBUL	AR DATA
SURFACE CASING	
SIZE: 8-5/8" TOC: Surface FEET HOLE SIZE: 12-1/4"	CEMENTED WITH: SX. DETERMINED BY: Circulation SETTING DEPTH: 422
INTERMEDIATE CASING	
TOC: FEET	CEMENTED WITH: SX. DETERMINED BY: SETTING DEPTH:
LONG STRING	
SIZE: 4-1/2" TOC: 210' FEET HOLE SIZE: 7-7/8" TOTAL DEPTH: 3150'	CEMENTED WITH: SX. DETERMINED BY: SETTING DEPTH: 3150'
PRODUCIN	G INTERVAL
SPUD DATE: 5:7:85	POOL OR FIELD: SE Chayes Queen OMPLETION DATE: 4-27-85 EET TO 2991 FEET
STIMULATION: 100 gals. 15% HC 4000 gals. CO2, 10500# 20/40	l acid, 12000 gals. gel water sand,10000# 12/20 sand
OTHER PERFORATED ZONES: None	
CURREN	T STATUS
WHAT IS CURRENT STATUS OF WEL	L? <u>Pumping oil well</u>
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the too, too and and and the too too the too too too too too too too too too to	The first time dies date being seek gate controlled today today controlled today today controlled today cont

OPERATOR: <u>Enron Oil &</u>	Gas_Co	LEASE: <u>Apache</u>	'27" State
WELL NO.: 2FOOTAG	3E:1 <u>6501</u> F	SL-2310/FEL_SE	EC: <u>27-112s-</u> R31e
		رر همید منبعه کامل محمد داخله دینی منبعد پیسور بعدی باشد باشد ماده داشد. را	
	TUBUL	AR DATA	
SURFACE CASING		·	
SIZE: 8-5/8" TOC: Surface HOLE SIZE: 12-1/4"	FEET	CEMENTED WITH: DETERMINED BY: SETTING DEPTH:	SX. Circulation 454'
INTERMEDIATE CASING			
SIZE: None TOC: HOLE SIZE:	FEET	CEMENTED WITH: DETERMINED BY: SETTING DEPTH:	SX.
LONG STRING			
SIZE: 4-1/2" TOC: Surface HOLE SIZE: 7-7/8" TOTAL DEPTH: 3150'		_SETTING DEPTH:	SX. Circulation 3150'
	PRODUCIN	3 INTERVAL	
FORMATION: Queen SPUD DATE: 7-29-85 PERFORATED: 2996	C(OMPLETION DATE:	_8-23-85
STIMULATION: _850 gals _25% CO2, 10500# 20/4	O sand.l	0000#_12/20_san	d
OTHER PERFORATED ZONE	S: <u>None</u>	hade to the color and the colo	
	CURREN	T_STATUS	
WHAT IS CURRENT STATU			well
IF F&A, LIST PLUGGING	DETAÌLS	THE THE NEW WINE THE THE JAME THE THE THE THE WHO WIN THE	

OPERATOR: Yates Drilling Co. LEASE: Burkitt Federal
WELL NO.: 1FOOTAGE: 2310 'FNL-1980 'FEL _SEC: _34-1125-R316
TUBULAR DATA
SURFACE_CASING
SIZE: 8-5/8" 24# CEMENTED WITH: 300 SX. TOC: Surface FEET DETERMINED BY: Circulation HOLE SIZE: 12-1/4" SETTING DEPTH: 450'
INTERMEDIATE CASING
SIZE: None CEMENTED WITH: SX. TOC: FEET DETERMINED BY: HOLE SIZE: SETTING DEPTH:
LONG_STRING
SIZE: 5-1/2" 14# CEMENTED WITH: 360 SX. TOC: 1650' FEET DETERMINED BY: Temp. Survey HOLE SIZE: 7-7/8" SETTING DEPTH: 3080' TOTAL DEPTH: 3100'
PRODUCING INTERVAL
FORMATION: Queen : FOOL OR FIELD: SE Chaves Queen SPUD DATE: 3-23-84 COMPLETION DATE: 4-7-84 PERFORATED: 2874 FEET TO 2882 FEET
STIMULATION: 750 gals. 15% HCl acid, 20000 gals. 30# gel, 25% CO2, 16500# 20740 sand, 6000# 12720 sand
OTHER PERFORATED ZONES: None
(**)
CURRENT STATUS
WHAT IS CURRENT STATUS OF WELL? <u>Fumping oil well</u> IF F&A, LIST FLUGGING DETAILS:

OPERATOR: Yates Drilling Co.	LEASE: Burkitt Federal
WELL NO.: 2 FOOTAGE: 16501F	NL9901FWLSEC:_34-T12s-R31e
TUBULA	B DATA
SURFACE CASING	
SIZE: 8-5/8" 24# TOC: Surface FEET HOLE SIZE: 12-1/4"	CEMENTED WITH: 375 SX. DETERMINED BY: Circulation SETTING DEPTH: 370'
INTERMEDIATE CASING	
SIZE: None TOC: FEET HOLE SIZE:	CEMENTED WITH: SX. DETERMINED BY: SETTING DEPTH:/
LONG STRING	
SIZE: 5-1/2" 14# TOC: 1670' FEET HOLE SIZE: 7-7/0" TOTAL DEPTH: 2850'	CEMENTED WITH: 250 SX. DETERMINED BY: Cement Bond Log SETTING DEPTH: 2845'
PRODUCING	3 INTERVAL
SPUD DATE: 5-5-84 CC PERFORATED: 2754 FE	POOL OR FIELD: SE Chaves Queen OMPLETION DATE: 7-10-84 ET TO 2760 FEET
5000 gals CO2, 14500# 20/40 g	acid, 15000 gals. 30# gel, sand, 2500# 12/20 sand
CURRENT	<u>STATUS</u>
WHAT IS CURRENT STATUS OF WELL	? Pumping oil well

OFERATOR: Yates Drilling C	o. LEASE: <u>Ourkitt Federal</u>
	30'FNL-2310'FWLSEC: 34-112s-R31e
	BULAR DATA
SURFACE_CASING	
SIZE: 8-5/8" 24# TOC: Surface F HOLE SIZE: 12-1/4"	CEMENTED WITH: 270 SX. EET DETERMINED BY: Circulation SETTING DEPTH: 424'
INTERMEDIATE CASING	
SIZE: None TOC: F HOLE SIZE:	CEMENTED WITH: SX. EET DETERMINED BY: SETTING DEPTH:
LONG_STRING	
SIZE: 5-1/2" 14# TOC: 1340' F HOLE SIZE: 7-7/8" TOTAL DEPTH: 3100'	CEMENTED WITH: 260 SX. EET DETERMINED BY: Temp. Survey SETTING DEPTH: 3083'
ERODL	CING_INTERVAL
FORMATION: Queen SPUD DATE: 8-9-855 PERFORATED: 2988	POOL OR FIELD: SE Chaves Queen COMPLETION DATE: 10-1-85 FEET TO 2992 FEET
STIMULATION: 750 gals. 157 24 tons CO2, 12000# 20/40	HCl acid, 15000 gals. get water sand, 7000# 12/20 sand
	ane
CUF	RENT STATUS
WHAT IS CURRENT STATUS OF	WELL? Pumping oil well
	AILS:

OPERATOR: Yates Drilling Co. LEASE: DeLuna Federal
WELL NO.: 3 FOOTAGE: _330'FNL-1980'FEL _SEC: 34-T12s-R31e
TUBULAR_DATA
SURFACE_CASING
SIZE: 8-5/8" 24# CEMENTED WITH: 300 SX. TOC: Surface FEET DETERMINED BY: Circulation HOLE SIZE: 12-1/4" SETTING DEPTH: 433'
INTERMEDIATE_CASING
SIZE: None CEMENTED WITH: SX. TOC: FEET DETERMINED BY: HOLE SIZE: SETTING DEFTH:
LONG STRING
SIZE: 5-1/2" 14# CEMENTED WITH: 410 SX. TOC: 1900' FEET DETERMINED BY: Cement Bond Loc HOLE SIZE: 7-7/8" SETTING DEPTH: 3094' TOTAL DEPTH: 3100'
PRODUCING_INTERVAL
FORMATION: Queen POOL OR FIELD: SE Chaves Queen SPUD DATE: 2-11-85 COMPLETION DATE: 3-20-85 PERFORATED: 2987-1/2 FEET TO 2993 FEET
STIMULATION: 750 gals, 15% hcl, 15000 gals, 30# gel, 23-1/2 tons CO2, 13000# 20/40 sand, 10000# 10/20 sand
OTHER PERFORATED ZONES: None
CURRENT STATUS
WHAT IS CURRENT STATUS OF WELL? <u>Pumping oil well</u>
IF P&A, LIST PLUGGING DETAILS:

OFERATOR: Yates Drilling Co. LEASE: Doyal
WELL NO.: 1FOOTAGE: 660'FNL- 990'FEL _SEC: 34-T12s-R31e
TUBULAR DATA
SURFACE_CASING
SIZE: 8-5/8" 24# CEMENTED WITH: 250 SX. TOC: Surface FEET DETERMINED BY: Circulation HOLE SIZE: 12-1/4" SETTING DEPTH: 409.46' INTERMEDIATE CASING
SIZE: None CEMENTED WITH: SX. TOC: FEET DETERMINED BY: HOLE SIZE: SETTING DEPTH:
SIZE: 5-1/2" CEMENTED WITH: 250 SX. TOC: 2200' FEET DETERMINED BY: Temp. Survey HOLE SIZE: 7-7/8" SETTING DEPTH: 3098' TOTAL DEPTH: 3100'
PRODUCING_INTERVAL
FORMATION: Queen POOL OR FIELD: SE Chayes Queer SPUD DATE: 7-31-84 COMPLETION DATE: 8-25-84 FEFTORATED: 2982' FEET TO 2989' FEET
STIMULATION: 750 gallons of 15 % HCl, 15000 gallons 30# gel, 5000 SCF N2 per barrel, 10900# 20/40 sand, and 4200# 10/20 sand.
OTHER PERFORATED ZONES: None
CURRENT STATUS
WHAT IS CURRENT STATUS OF WELL? <u>Fumping oil well</u> . IF F&A, LIST PLUGGING DETAILS:

OPERATOR: Yates Drilling Co. LEASE: Doyal
WELL NO.: 2 FOOTAGE: 500'FSL- 760'FEL SEC: 27-T125-R316
TUBULAR DATA
SURFACE CASING
SIZE: 8-5/8" 24# CEMENTED WITH: 275 SX. TOC: Surface FEET DETERMINED BY: Circulation HOLE SIZE: 12-1/4" SETTING DEPTH: 411
INTERMEDIATE CASING
SIZE: Mone CEMENTED WITH: SX. TOC: FEET DETERMINED BY: HOLE SIZE: SETTING DEPTH:
LONG_STRING
SIZE: 5-1/2" CEMENTED WITH: 250 SX. TOC: 2200 FEET DETERMINED BY: Temp. Survey HOLE SIZE: 7-7/8" SETTING DEPTH: 30987 TOTAL DEPTH: 31007
PRODUCING INTERVAL
FORMATION: Queen FOOL OR FIELD: SE Chaves Queen SPUD DATE: 9-7-84 COMPLETION DATE: 9-20-84 PERFORATED: 2981' FEET TO 2987' FEET
STIMULATION: 750 gallons of 15 % HCl, 15000 gallons 30# gel, 25% CO2 12000# 20740 sand, 10000# 10720 sand.
OTHER PERFORATED ZONES: None
CURRENT STATUS
WHAT IS CURRENT STATUS OF WELL? Fumping oil well.
IF P&A, LIST PLUGGING DETAILS:

OFERATOR: Yates Drilling	g Co.	LEASE: <u>Doyal</u>	
WELL NO.: 3 FOOTAGE:	: <u>1980/</u>		0: <u>27-1</u> 12s-R31e
	TUBULA	AR DATA	
SURFACE CASING			
SIZE: 8-5/8" 24# TOC: Surface HOLE SIZE: 12-1/4"	FEET	CEMENTED WITH: 2 DETERMINED BY: 0 SETTING DEPTH: 2	860 SX. Dirculation
INTERMEDIATE CASING			
SIZE: None TOC: HOLE SIZE:	FEET	CEMENTED WITH: DETERMINED BY: SETTING DEPTH:	SX.
LONG STRING			
SIZE: 5-1/2" 14# TOC: 630' HOLE SIZE: 7-7/8" TOTAL DEPTH: 3100'	FEET	CEMENTED WITH: EDETERMINED BY: SETTING DEPTH: S	350 SX. Temp. Survey 3099′
<u>PR</u> (ODUCIN	G INTERVAL	
FORMATION: Queen SPUD DATE: 9-20-94 PERFORATED: 2991'	C	FOOL OR FIELD: S	SE Chayes Queer NOME
PERFORATED: 2991 STIMULATION: 750 gallon . 25% CO2 20000# 20740	s of 1	5 % HCl, 15000 a	allons 30# gel d.
OTHER PERFORATED ZONES:			
	CURREN	T_STATUS	
WHAT IS CURRENT STATUS			ed
IF F&A, LIST FLUGGING D	ETAILS		

OPERA	TOR	: _Y <u>@</u>	tes_	Dr. 1.1.1	ing.	Co	_LEA	SE: L)OXa1				
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***************************************	***************************************			nn mad tall day (TUBUL							
SURE	ICE	CASI	NG							-			
TOC:	Su	rtac	@			FEET	DET	ERMIN	4ED B	۱ ۲:	Circ	ulatı	sx.
INTER	RMED	IATE	CAS	ING									
TOC:					**** **** *** ***	FEET	DET	ERMIN	MED E	۲Y:			sx.
LONG	STR	ING											
TOC:	SIZ	10' E: /	-778			FEET	DET SET	ERMIN	VED E	Y:	Temp	. Sur	SX. Yey
					PRO	DUCIN	G IN	ITERV	AL				
FORMA SPUD PERFO	OTTA TAQ TARC	N:_0 E:_1 ED:_	lueen 1-18	-84 2982	• 1000 1007 4406 0 • 1000 1000 1000 1	C	_POC OMPL EET	OL OR ETION TO	FIEL V DAT	D:	SE C 1-24 2985	hayes -87	_Queen FEET
				5000#	20	/40 s	and,	_8509	0 # 1	127	20_sa		t gel
OTHE	R PE	ERFOR	RATEL	ZONE	:S:	None_							
					C	URREN	T ST	ratus					
WHAT	18	CURE	RENT	STATL					na oi	il (vell		- start vide time ()
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OFERATOR: Yates Drilling Co. LEA	SE: Gallagher State
WELL NO.: 1 FOOTAGE: 3301FNL-	<u>330'FWL</u> SEC: 35-T12s-R31e
Part with 1879 July 1820 Acres 18	1888 \$-18 1964 (1897 AMP 1880 1880 1880 1880 1880 1880 1880 188
THEIR AFT I	۸۳۸
TUBULAR D	<u> </u>
SURFACE CASING	
SIZE: 8-5/8" 24# CEM TOC: Surface FEET DET HOLE SIZE: 12-1/4" SET	ERMINED BY: Circulation
INTERMEDIATE CASING	
SIZE: None CEM TOC: FEET DET HOLE SIZE: SET	ERMINED BY:
LONG_STRING	
SIZE: 5-1/2" 14# CEM TOC: Surface FEET DET HOLE SIZE: 7-7/8" SET TOTAL DEPTH: 3100"	ERMINED BY: Circulation
PRODUCING IN	ITERVAL
FORMATION: Queen POC SPUD DATE: 10-28-84 COMPL PERFORATED: 2982' FEET	DL OR FIELD: SE Chaves Queen ETION DATE: 11-9-84 TOFEET
STIMULATION: 650 gallons of 15 % . 22 tons CO2, 12000# 20740 sand.	HCl, 15000 gallons 30# gel 10750# 10720 sand.
OTHER PERFORATED ZONES: None	
CURRENT ST	arus
WHAT IS CURRENT STATUS OF WELL?_F	umping oil well
IF P&A, LIST PLUGGING DETAILS:	
The side total part that part the sent the side that the side that side that side that side that the	

OPERATOR: Yates Drilling Co. LEASE: Garner Federal
WELL NO.: 2 FOOTAGE: 2310'FSL-2310'FEL SEC: 34-T12s-R31
TUBULAR DATA
SURFACE CASING
SIZE: 8-5/8" 240 CEMENTED WITH: 250 SX TOC: Surface FEET DETERMINED BY: Circulation HOLE SIZE: 12-1/4" SETTING DEPTH: 410'
INTERMEDIATE CASING
SIZE: None CEMENTED WITH: SX TOC: FEET DETERMINED BY: HOLE SIZE: SETTING DEPTH:
LONG_STRING
SIZE: 5-1/2" 14# CEMENTED WITH: 550 SX TOC: 1992' FEET DETERMINED BY: Cement Bond Lo HOLE SIZE: 7-7/8" SETTING DEPTH: 3098' TOTAL DEPTH: 3100'
FRODUCING INTERVAL
FORMATION: Queen POOL OR FIELD: SE Chaves Queen SPUD DATE: 4-29-84 COMPLETION DATE: 6-1-844 PERFORATED: 2982 FEET TO 2990 FEE
STIMULATION: 750 gals. 15% HCl acid. 20000 gals. 30# gel. 25% CO2. 16500# 20740 sand. 1700# 12720 sand
OTHER PERFORATED ZONES: None
CURRENT_STATUS
WHAT IS CURRENT STATUS OF WELL? Pumping oil well
IF F&A, LIST FLUGGING DETAILS:

OPERATOR: Yates Drilling Co. LEASE: Garner Federal
WELL NO.: 3 FOOTAGE: 1980 FNL-1980 FEL SEC: 34-T125-R316
TUBULAR DATA
SURFACE_CASING
SIZE: 8-5/8" 24# CEMENTED WITH: 225 SX TOC: Surface FEET DETERMINED BY: Circulation HOLE SIZE: 12-1/4" SETTING DEPTH: 408'
INTERMEDIATE CASING
SIZE: None CEMENTED WITH: SX TOC: FEET DETERMINED BY: HOLE SIZE: SETTING DEPTH:
LONG_STRING
SIZE: 5-1/2" 14# CEMENTED WITH: 250 SX TOC: 1810 FEET DETERMINED BY: Temp. Survey HOLE SIZE: 7-7/8" SETTING DEPTH: 3100 TOTAL DEPTH: 3100 SETTING DEPTH: 3100
PRODUCING INTERVAL
FORMATION: Queen POOL OR FIELD: SE Chaves Queen SPUD DATE: 7-2-84 COMPLETION DATE: 8-12-84 PERFORATED: 2981 FEET TO 2986 FEET
STIMULATION: 750 gals. 15% HCl acid, 13000 gals. 30# gel, 5000 SCF N2 per barre, 1500# 20740 sand, 1700# 12720 sand
OTHER PERFORATED ZONES: None
188 MIN 1981
CURRENT_STATUS
WHAT IS CURRENT STATUS OF WELL? <u>Pumping oil well</u>
IF P&A, LIST PLUGGING DETAILS:

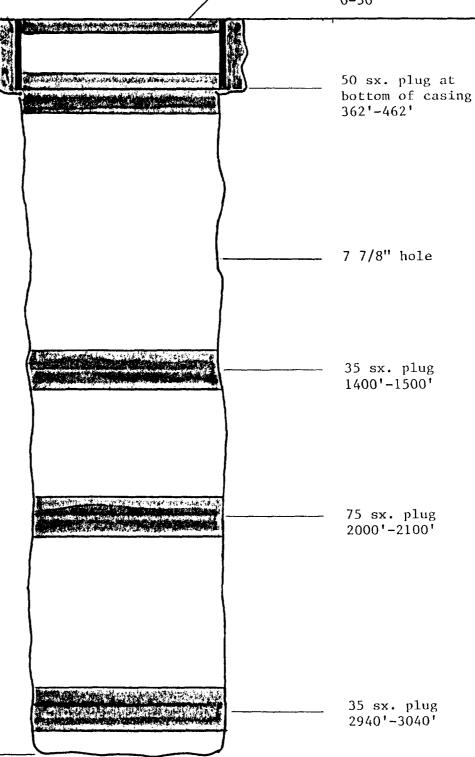
OPERATOR: Yates Drilling Co. LEASE: Garner Federal
WELL NO.: 7FOOTAGE: _660'F5L-1980'FEL _SEC: _27-T12s-R31e
TUBULAR DATA
SURFACE CASING
SIZE: 8-5/8" 24# CEMENTED WITH: 250 SX. TOC: Surface FEET DETERMINED BY: Circulation HOLE SIZE: 12-1/4" SETTING DEPTH: 424'
INTERMEDIATE CASING
SIZE: None CEMENTED WITH: SX. TOC: FEET DETERMINED BY: HOLE SIZE: SETTING DEPTH:
LONG STRING
SIZE: 5-1/2" 14# CEMENTED WITH: 270 SX. TOC: 1900' FEET DETERMINED BY: Temp. Survey HOLE SIZE: Z-Z/8" SETTING DEPTH: 3098.54' TOTAL DEPTH: 3100'
PRODUCING INTERVAL
FORMATION: Queen POOL OR FIELD: SE Chaves Queen SPUD DATE: 10-14-84 COMPLETION DATE: 10-30-84 FERFORATED: 2987' FEET TO 2993' FEET
STIMULATION: 750 gallons of 15 % HCl, 15000 gallons 30# gel , 1000 SCF/RBL CO2 13000# 20740 sand, 9000# 10720 sand
OTHER PERFORATED ZONES: None
CURRENT_STATUS
WHAT IS CURRENT STATUS OF WELL? Pumping oil well
IF P&A, LIST PLUGGING DETAILS:

OPERATOR: Yates Drillio	g_Co	_LEASE: _Garner	Federal
WELL NO.: 9 FOOTAGE	:16501	ESL-2310'FEL	SEC: 27-T12s-R31e
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	TUBUL	AR DATA	
SURFACE CASING			
SIZE: 8-5/8" 24# TOC: Surface HOLE SIZE: 12-1/4"	FEET	DETERMINED BY	':_Circulation
INTERMEDIATE CASING			
SIZE: None TOC: HOLE SIZE:	FEET	DETERMINED BY	*
LONG STRING			
SIZE: 5-1/2" 14# TOC: 1820' HOLE SIZE: 7-7/8" TOTAL DEPTH: 3100'	FEET	_CEMENTED WITH DETERMINED BY _SETTING DEPTH -	H: 320 SX. ': Temp. Survey H: 3098'
<u>es</u>	RODUCIN	G INTERVAL	
FORMATION: Queen SPUD DATE: 11-11-84 PERFORATED: 29851	C	_POOL OR FIELD OMPLETION DATE EET TO): SE Chaves Oueer E: 11-30-84
STIMULATION: 750 gallon , 16 tons of CO2, 1800	s of 1	5 % HCl. 15000	gallons 30% get
OTHER FERFORATED ZONES:	None_		
	CURREN	T_STATUS	
WHAT IS CURRENT STATUS	OF WEL	L? <u>Pumping oi</u>	w <u>e</u> 11
IF P&A, LIST PLUGGING D	ETAILS	and other forms were lives from four four four owner rests many from the	w 1000 And 2000 New 1840 And 1860 And 1860 And
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OPER	ATOR:	Yates.	<u>Drilling</u>	g Co.	LEASE: Rich	Federal	*************************
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		drawn prove brown aroun plants Medic p			ng days naha nama 1860 (1860) bira (1860 nama 1860 1870) (1870 1870 1870 1870 1870 1870 1870 1870		oder territa sama saina; philip nipun
				TUBUL	AR_DATA		
SURF	ACE C	ASING					
TOC:	Sur	face		FEET	CEMENTED WITH DETERMINED B SETTING DEFTH	Y: Circulati	on
INTE	RMEDI	ATE CA	SING				
SIZE TOC: HOLE	SIZE	<u>e</u>	100 MIC MIC MIC CON THE CONT.	FEET	CEMENTED WITH DETERMINED B SETTING DEFT	H:	sx.
LONG	STRI	ЙĞ					
SIZE TOC: HOLE TOTA	: <u>Mo</u> n SIZE L DEF	: 7-7/ TH: 31	90	FEET	CEMENTED WITH DETERMINED B SETTING DEPTH	H: Y: H:	SX.
			ERI	DDUCIN	3 INTERVAL		
FORM SPUD PERF	ATION DATE ORATE	l: None : 11-3 D:	0-84	C(POOL OR FIEL OMPLETION DAT	D: SE Chayes E: None	Queen FEET
STIM	ULATI	ON: <u>No</u>	ne				
***** ***** ***** ******							
OTHE	R PER	FORATE	D ZONES:	None_			
				aren a banno provi proper b. b			
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					_? <u>Plugged an</u>		
_Cla _Plu	g 304 ss "C g 462	O=2940 "_w/2%	CaCl2,	Class plug 1	:_P&A_12-12-8 "C" neat, Plu 500-1400: 35 " w/2% CaCl2,	g_2100-2000′ sx_Class_"C"	neat,

RICH FEDERAL # 1 2310' FNL & 2310' FEL Section 27-T12S-R31E Chaves County, New Mexico

20 sx. surface plug 0-50'



Total Depth 3100'

OPER	ATOR: <u>Snow</u>	Oil Company	_LEASE: _To	les Federal	140 April 1001 1000 1000 - ,10 100
WELL	NO.: 1	FOOTAGE: 1980'	ESL-1650'F	WL_SEC: 26-T1	2s-R31e
	rang both with min amin part from 1888 from along all		the form that the dead was such that any agen the	angh highs with little angle dang high little firsts water angle state class water	
		TUBUL	AR_DATA		
SURF	ACE CASING				
SIZE TOC: HOLE	:_8-5/8" Surface SIZE:_12-1	FEET	_CEMENTED (DETERMINE) _SETTING D	WITH: D BY: Circulat EPTH: 473'	sx.
INTE	RMEDIATE CA	JEING			
SIZE TOC: HOLE	: None SIZE:	FEET	_CEMENTED DETERMINE _SETTING D	WITH: D BY: EFTH:	sx.
LONG	STRING				
SIZE TOC: HOLE TOTA	: 4-1/2" 900: SIZE: L DEPTH: 31	FEET	_CEMENTED DETERMINE _SETTING D	WITH: D BY: Estimate EPTH: 3115/	SX.
		PRODUCIN	G_INTERVAL		
FORM SPUD PERF	ATION: Quee DATE: 1-8 ORATED:	en -85 C 2344 F	_POOL OR F OMPLETION : EET TO	IELD: SE Chave DATE: None 2845	s Queen
		one close their same that there same dies that their that their same same			
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OTHE	R PERFORATE	ED ZONES: None			
		CURREN	IT STATUS		
WHAT	IS CURRENT	T STATUS OF WEL		and Abandoned	
IF F	&A, LIST PL	_UGGING DETAILS IBP @ 2290 , cu 571, 35ex plug	:_3sx_plug	on CIBP @ 295	· O ·
				delien somme ander blider bermy many many electric electric being being ground (Place delete separ	

TOLES FEDERAL # 1 1980' FSL & 1650' FWL Section 26-T12S-R34E Chaves County, New Mexico

10 sx. surface plug

35 sx. plug at 524'

Open Hole

Cut and pulled csg. at 825'
35 sx. plug at 867'
App. top of cement at 900'

3 sx. on CIBP at 2290'

3 sx. on CIBP at 2990'

4 1/2" set at 3115'

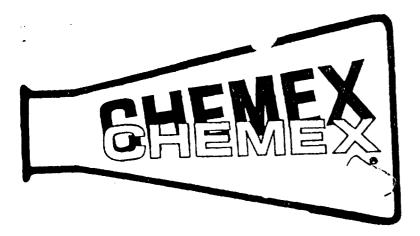
Total Depth 3115'



P. O. Hours. Atlesia N. M. HALLIS

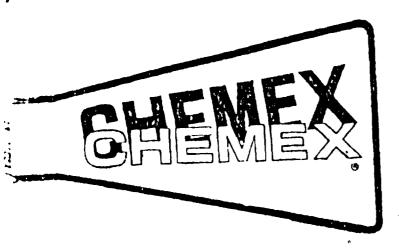
Yates Drillin	ng Co.		·····	Date	2-5-85
		Co	unt, <u>Chaves</u>	State:	NM
Sample Sample	· #1	Prod Formata	d)		Berthin to the section of the sectio
or Campie well	head		*		
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P. O. Box 423 Artesia, N. M. 88210

Company Yates Drilling		Date3-22-85
FieldSpears Water S	Sample, NW/4SW/	/4 Section 26-125-31E Chaves State N.M.
Lease and Well No.		Prod. Formation
Source of Sample		
Sample of Prod. Water□	Inj. Water[]	Other()
Date Collected		Analyst James B. Campanella
		R ANALYSIS PATTERN R SYMBOL INDICATES me Tr SCALE UNIT)
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N8**		111111111111111111111111111111111111111
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Fe***		<u> </u>
Dissolved Solids Constituent	MG/L (PPM)	ЕРМ
Constituent		u .
Calcium	nil nil	ph6.0
Magnesium Sodium	nil	Sp. Gravity
Iron	nil	
Chloride	nil	The state of the s
Bicarbonate	nil	
Carbonate	<u>nil</u>	
Sulfate	120	- <u>- </u>
Total Hardness	nil	
Total Dissolved Solids		
Hydrogen Sulfide		
Oxygen		
Remarks:		
Fresh H2O		o ''



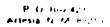
P.O. Box 423 Affesia, N. M. ali210

rpany Yates Drill		County_C	Date	
e and Well No Same	ole #2			. —
rcv of Sample <u>well</u>	head	9		
per 1 Prod Water	x Inj. Water. Othe	er 1		
e Colored <u></u>		_ Analyst James	B. Campanella	
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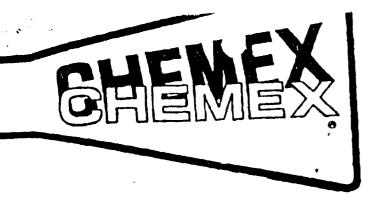
P D Box 423 Artesia, N M 88210

mpany Yates Drla Co.	Date
· · · ·	CountyState
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imple of Prod. Water: x Inj. Water.	Other 1
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mpany Yates	Drilling Co.		· · · · · · · · · · · · · · · · · · ·	Date	10-3-84
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ample of Prod. Water	ei ^X Inj. Water	*Other : "			
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P. O. Bus 423 Artesia, N. M. 68210

ompany Yates Drilling Co.	n .	Date	11-20-84
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ource of Sample		-	
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ron 394 Chloride 201,000	5662	• ·	
Bicarbonate 400 Carbonate N11	711	•	• :
Sulfate 1,200	2.5	-	
total Hardness 48,000 total Dissolved Solids 250,600		ue 	
Hidrogen Sulfide N11		- -	
-ti-marks:	v u		
		· · · · · · · · · · · · · · · · · · ·	
			



P. O. Box 423 Artesia, N. M. 88210

pany Yates Drlg.	Date9-21-84	
	State	
e and Well No. Doyal #2	Prod. Formation	
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ple of Prod. Water M. Inj. Water () Oth	er. I	
Collected	"	
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al Dissolved Solids 179483 drogen Sulfide 7	0	
gen10+		
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KCL 0%		
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CACTUS QUEEN UNIT ADDRESSEE LIST SURFACE OWNERS AND OFFSET OPERATORS

Mr. Raymond Spears 307 N. 7th Street Lovington, NM 88260 Mrs. J. D. Spears Box 1017 Carlsbad, NM 88220 Enserch Exploration, Inc. 6 Desta Drive Suite 5250 Midland, Texas 79705-5510 Attention: Steve Wright

Phillips Petroleum Company 4001 Penbrook Odessa, Texas 79762 Attention: Frank Hulse Reading & Bates Petroleum Company 2412 N. Grandview Suite 201 Odessa, TX 79761 Attention: Don Kipgen

Burk Royalty
P. O. Box BRC
Wichita Falls, Texas 76307

Rich Partnership
P. O. Box 3402
Casper, Wyoming 82602
Attention: Ken Snyder

Great Western Drilling Company Box 1659 Midland, TX 79702 Attention: Pat L. Shannahan Dalport Oil Corporation 3471 Interfirst One Dallas, Texas 75202

E. S. Mayer, Jr.
c/o Reading & Bates Petroleum
Company
2412 N. Grandview
Suite 201
Odessa, TX 79761
Attention: Don Kipgen

C. R. Gallagher, Jr. 1005 Texas Commerce Bank 1208 - 14th Street Lubbock, Texas 79401 Gregory J. Gallagher 8550 Kathy Freeway Suite 208 Houston, Texas 77024

Robin C. Herndon, III c/o Robin C. Herndon, Jr. P. O. Box 2031 Mobile, Alabama 36601 Yates Drilling Company 105 South Fourth Street Artesia, New Mexico 88210 Attention: Toby Rhodes