LIL CONSERVATION DIVISION POST OFFICE BOX 2018 STATE LAND DIFFICE BIRDING BANTA FE, NEW MEXICO PROTECTION

FORM C-108 Revised 7-1-81

NPLICA	TION FOR AUTHORIZATION TO INJECT NOV 1
I.	Purpose: X Secondary Recovery Pressure Maintenance Disposal Storage Application qualifies for administrative ONSTRVAYEN DIVISION YES X no
II.	Operator: Yates Drilling Company
	Address: 105 South 4th Street, Artesia, NM 88210
	Contact party: Tobin L. Rhodes Phone: (505) 748-1471
III.	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.	Is this an expansion of an existing project? X yes \square no If yes, give the Division order number authorizing the project $R-9075$
٧.	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 data 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.).
VIII.	Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.
IX.	Describe the proposed stimulation program, if any.
х.	Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)
XI.	Attach a chemical analysis of fresh water from two or more fresh water wells (if 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 fone and any underground source of drinking water.
XIII.	Applicants must complete the "Proof of Notice" section on the reverse side of this form.
XIV.	Certification YATES DOWN 1
	I hereby certify that the information submitted with the information submitted with the information is true and correct to the best of my knowledge and belief.
٠.	Name: Tobin I. Rhodes Title Petroleum Engineer
	Signature: Date: 11-9-92
enpu	he information required under Sections VI, VIII, X, and XI above has been previously itted, it need not be duplicated and resubmitted. Please show the date and circumstance he earlier submittal.

OIL CONSERVATION DIVISION FORM C-108 (SUPPLEMENT)

I. Purpose:

Application is made by Yates Drilling Company for authorization to inject water into the Queen formation underlying the boundaries of the proposed expansion area of the Cactus Queen Unit. The proposed expansion area consists of 320 acre, more or less, of Federal lands (Federal minerals, private surface) in units E. F. G. J. K. L. M and N (W/2, SW/4 of NE/4, NW/4 of SE/4) of Section 34, Township 12 South, Range 31 East, Chaves County, New Mexico. This project will be an expansion of the existing secondary recovery project with the objective of recovering hydrocarbons that will not and can not be recovered by primary means.

All of the wells in the expansion area are primary depleted or very near primary depletion. Our studies show that the injection of water into selected wells will result in the recovery of oil in economic quantities not otherwise recoverable. This project should provide economic benefits to all parties holding any type of interest in the expansion acreage.

II Operator:

Yates Drilling Company
105 South Fourth Street

Artesia, New Mexico 88210

Phone Number: (505) 748-1471

Contact: Tobin L. Rhodes

III. Injection Well Data:

A well data sheet and schematic is included for each of the five proposed water injection wells. Each schematic demonstrates how the injection well will be configured if this application is approved

IV. Existing Project:

The proposed project is an expansion of the Cactus Queen Unit. Formation of the Cactus Queen Unit was approved by the New Mexico Oil Conservation Division December 14, 1989 by authority of order R-9075A. Permission to inject into selected wells within the Cactus Queen Unit was granted March 15, 1990 by authority of order R-9075B.

V. Ownership:

A lease ownership map is attached which identifies all wells and lease ownership within two miles of any of the five proposed injection wells. On this map the area of review has been identified by drawing a one half mile circle around each injection well.

VI. Well Data:

There are presently twelve wells, including the proposed injection wells that fall within the boundaries of the expansion area or within the area of review. There are no wells within the area of review that have been plugged and abandoned. There are three wells within the area of review that are active injecting wells, injecting water into the Queen formation. There are ten wells that are active producing oil wells, producing from the Queen formation. Available data for each of these wells is included in a well data sheet.

VII. Project Data:

- 1. The proposed daily average water injection rate is expected to be approximately 200 barrels per day for each of the five proposed injection wells. The maximum injection rate for any well will be based on fracture pressures as determined by step-rate pressure tests to be conducted on each injection well. The maximum injection rate is expected to be less than 400 barrels per day.
- 2. Unit produced water and fresh water from the supply well will be stored in covered fiberglass storage tanks. There is no immediate plan to accept water from any other sources.
- 3. Initially, injection wells may take water on a vacuum, but as the reservoir fills a positive surface injection pressure will be required to inject water. The maximum injection pressure will also be determined by the planned step-rate pressure tests. At no time prior to the step-rate tests will the injection pressure exceed a pressure limitation of 0.2 PSIG per foot of depth to the top of the injection interval.
- 4. The source of injection fluid will be produced water from producing wells within the unit and fresh water from the our fresh water well producing from the Ogollala Aquifer

5. The Ogollala has been the source of water for many Queen waterfloods for many years without significant compatibility problems. We have had compatibility tests run with no compatibility problems observed.

VIII. Geologic Data:

The Cactus Queen Unit and the proposed expansion area produce from the upper sandstone member of the Queen formation, upper Guadalupian series. Permian system. The average producing depth in the field is approximately 2990 feet.

The productive/injection interval, as indicated from a whole core analysis on the Cactus Queen Unit #6 (330' FNL & 1980' FEI, 34-12S-31E, Chaves County, New Mexico) and from sidewall cores from numerous wells, is fine grained, friable, gray, quartz sandstone. The grains are subangular to subrounded and well sorted. The cementing materials are anhydrite and dolomite. The exact depositional environment is unknown. Porosity and permeability are intergrandular in nature. The sandstone is not naturally fractured.

The Cactus Queen Unit reservoir is a stratigraphic trap. Cementation of the sandstone results in the loss of porosity and permeability, creating a barrier on all sides with the exception of the east. An oil/water contact has been established on the eastern edge of the reservoir.

The primary source of fresh water in this area is the Ogollala formation of Tertiary age, the base of which is estimated to be 300 feet below the surface. This aquifer is protected behind the surface casing and cement of all the unit wells and proposed unit wells. The Chinlee formation is also a fresh water aquifer 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 is behind the surface casing of all existing wells in the area.

IX. Stimulation Program:

Each of the currently producing wells has previously received a fracture treatment. The details 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 wells which will be injection wells may require a small clean-up acid treatment prior to injection. We plan to treat each of the proposed injection wells with 500 to 1000 gallons of 7-1/2% hydrochloric acid. This treatment should insure that existing perforations are open and that each well will accept water at the lowest possible pressure.

X. Well Logs:

Well logs for each of the existing wells in the proposed expansion area have previously been submitted to the Hobbs office of the NMOCD.

XI. Fresh Water:

The office of the State Engineer in Roswell has a record of seven wells within one mile of the proposed unit expansion area. The exact total depth of all of the wells is unknown, however all wells are assumed to be producing from the Ogollala formation. Analysis reports from three of the wells are attached.

XII. Injection Zone Isolation:

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

XIII. Proof of Notice:

A listing of off-set leasehold operators within one half mile of any proposed injection well and the surface owner(s) 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.

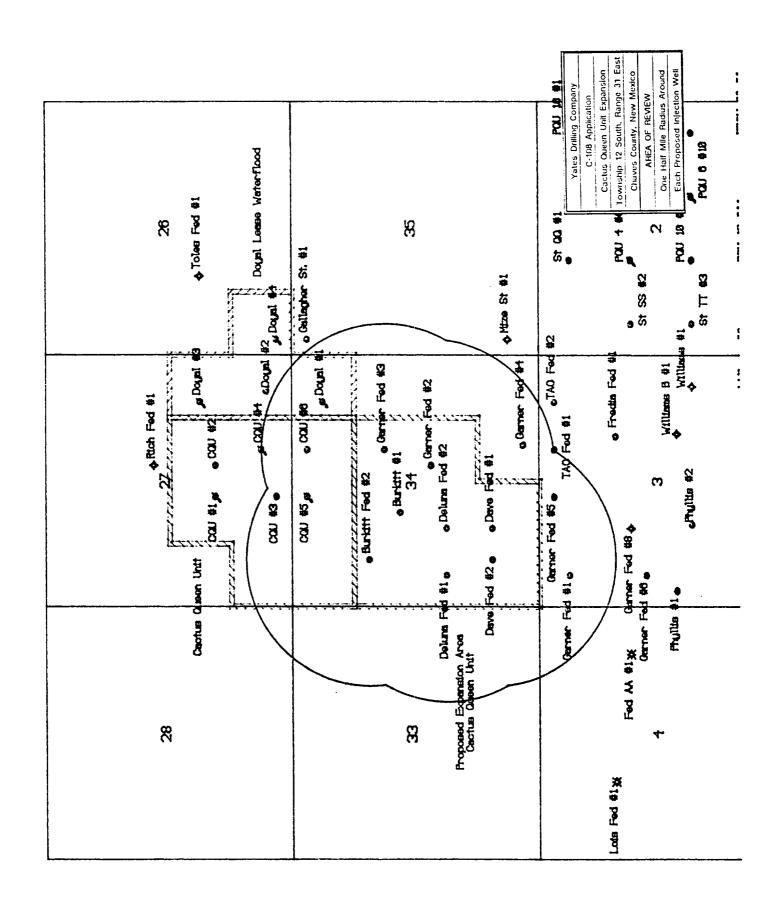
Tobin L. Rhodes

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Petroleum Engineer

November 9, 1992

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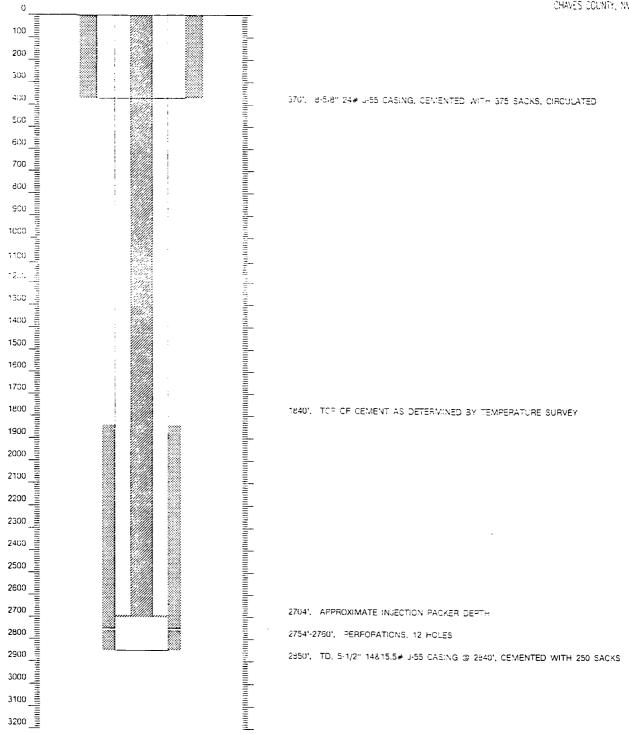


LEASE: WELL #: FCOTAGE: SEC-TWN-RNG, COUNTY, STATE: SPUD DATE: COMPLETION DATE: CURRENT STATUS:	Yates Drilling Company Burkitt Federal 1 2310' fnl & 1980' fel 34-125-34E. Chaves County. New Mexic 23-Mar-84 7-Apr-84 Active producing well - Queen Active producing well - Queen	50	
CASING WEIGHT CASING GRADE DEPTH SET CEMENTED USED TOP OF CEMENT	8,625 INCHES 24,000 POUNDS,FCOT J-55 450 FEET 300 SACKS 0 FEET circulate 12,250 INCHES	PRODUCTION CASING CASING SIZE: CASING WEIGHT: CASING GRADE: DEPTH SET: CEMENTED USED: TOP OF CEMENT: DETERMINED BY: HOLE SIZE: TOTAL DEPTH: PLUGGED BACK TD:	14,000 POUNDS FOOT J-55 3,050 FEET 050 SACKS 1,650 FEET 00. survey 7,375 NOHE5 3,100 FEET
PREVIOUS STIMULATION PROPOSED STIMULATION INJECTION TUBING (if an i	: 2,874 FEET : Perforated : 750 gallons 15% HCL acid clus 20,000 16,500 pounds of 20/40 sund, 6000 po	unds of 12/20 sand	
OTHER DATA 1. Name of injection or p	: <u>NA</u>	CEPTH TO BE SET: NA	FEET
No List all such perforate None 5. Give depth to and har	rforated in any other zones? ed intervals and give plugging details (sa	or gas zones (pools) in this area.	
this well.	abandoned, list details of plugging and a	er than the Queen in the area surrounding	

LEASE: BU WELL #: FOOTAGE: 16 SEC-TWN-RNG, COUNTY, STATE: 34 SPUD DATE: COMPLETION DATE: CURRENT STATUS: AC	tes Drilling Company rkitt Federal 2 50' fml & 990' fwl -125-34E. Chaves County, New Mexico 5-May-84 10-Jul-84 tive producing well - Queen tive injection well - Cueen		
CASING WEIGHT: CASING SPADE: DEPTH SET: CEMENTED USED: TOP OF CEMENT: CETERMINED BY:	370 FEET 375 SACKS 0 FEET	DEPTH SET: CEMENTED USED: TOP OF CEMENT: DETERMINED BY: HOLE SIZE: TOTAL DEPTH:	14.000 PCUNDS, FCOT J-55 2.345 FEET 250 SACKS 1.578 FEET CBL 7.975 INCHES
COMMENTS: PAPEVICUS STIMULATION: 75	2,754 FEET		2.760 FEET
INJECTION TUBING (if an injec TUBING SIZE: PACKER: <u>N</u>	ttion well) 2.375 INCHES ickel plated tension packer	UNING: <u>plastic</u> DEPTH TO BE SET:	2.704 FEET
	applicable).		
4. Has well ever been perfor No List all such perforated in None	ated in any other zones? Intervals and give biugging details (cacks	of coment or bridge plug(s) used).	
	of any overlying and/or underlying oil or by production from any formation other to		
6. If well is plugged and aba Not applicable.	indoned, list details of plugging and attai	ch schematic.	

BURKITT FEDERAL #2

E34-12S-31E CHAVES COUNTY, MM



OPERATOR: Yates Drilling Company LEASE: Cactus Queen Unit WELL #: 3 FOOTAGE: 1650' fsl & 2310' fel SEC-TWN-RNG. CCUNTY. STATE: 27-125-34E. Chaves Ccunty. New Mexico SPUD DATE: 29-Jul-65 CCMPLETICN DATE: 23-Aug-65 CU9RENT STATUS: Active producing well - Cueen PRCPOSED STATUS: Active producing well - Cueen	
CASING SIZE: 8.625 INCHES CASING SIZE: 405.000 INCHES	
INJECTION OR PRODUCING INTERVAL INTERVAL TOP: 2.984 FEET INTERVAL BOTTOM: 2.991 FEET COMMENTS: Perforated PREVIOUS STIMULATION: 12,000 gailens geiled water, 4,000 CO(2), 10,500 bounds 20/40 sand and 10,000 pounds 12/20 sand PROPOSED STIMULATION: None	
INJECTION TUBING (if an injection well) TUBING SIZE: NA INCHES LINING: NA PACKER: NA DEPTH TO BE SET: NA FEET	-
OTHER DATA 1. Name of injection or producing interval. Queen 2. Name of field or pool (if applicable). SE Chaves Queen 3. Is this a new with drilled for injection? No. If no, for what purpose was the well originally drilled? This well was originally drilled as a Queen producing well.	
4. Has well ever been perforated in any other zones? No List as such perforated intervals and give plugging details (sacks of cement or bridge plug(s) used). None	
 Give depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. There has never been any production from any formation other than the Queen in the area surrounding this well. 	
If well is plugged and abandoned, list details of plugging and attach schematic. Not applicable.	

	Yates Drilling Company		
	Cactus Cucen Unit		
FCCTAGE;	660' fsl & 1980' fel		
11	27-12S-34E. Chaves County, New Mexico 14-Oct-84		
COMPLETION DATE:	30-Oct-84		
	Active injection well - Queen Active injection well - Queen		
SUBSACE CACINO		COODUCTON OACING	
SURFACE CASING		PRODUCTION CASING	
CASING SIZE	8.625 INCHES 24.000 POUNDS/FOOT	CASING SIZE:	5.500 INCHES
II CASING GRADE	: J-55	CASING GPADE:	14,000 POUNDS-FOOT J-55
DEPTH SET	424 FEET 250 SACKS	DEPTH SET:	3.099 FEET
TOP OF CEMENT	250 SACKS 0 FEET	DEPTH SET:	270 SACKS 1,900 FEET
DETERMINED BY	c.rculate 12.250 INCHES	DETERMINED BY: to	mo survey
HOLE SIZE	: 12.250 INCHES	HOLE SIZE:	7.875 INCHES 3.100 FEET
		PLUGGED BACK TD:	3,099 FEET
			<u> </u>
INJECTION OR PRODUCING	INTERVAL		
	: 2,987 FEET	INTERVAL BOTTOM:	2,993 FEET
	: 750 gailons of 15 % HCL plus 15,000 gail		CO2,
PROPOSED STIMULATION	13,000 pounds of 20/40 sand and 9,000 of None	ocunds of 20/40 sand	····
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IN IECTION TURING (if on	nination wall		
INJECTION TUBING (if an i	njection wear		
TUBING SIZE	2.375 INCHES inickel plated tension packer	LINING: plast DEPTH TO SE SET:	2.036 5557
PACKER	. Tilekei plated terision backer	BEFTH TO BE SET	2,930 FCE:
			
OTHER DATA			
1. Name of injection or p	roducing interval.		
Queen			
2. Name of field or pool	(if applicable).		
SE Chaves Queen			
3. Is this a new well drill	ed for injection?		
<u>No.</u>			
If no, for what purpos	e was the well originally drilled?		
This well was original	y drilled as a Queen producing well.		
			
11	rforated in any other zones?		
No No			
II .	ed intervals and give plugging details (sack	s of dement or bridge plug(s) used).	
None			
5 000 4005 00 000	no of any quarture and/or and/or	and Johns (needs) in the	
	ne of any overlying and/or underlying oil or any production from any formation other		1
this well.			
C 14	abandonia ist state of st	och sahamatic	
6. If well is plugged and Not applicable.	abandoned, list details of plugging and atto	ach Schemauc.	
II .			

CPERATOR: Yates Drilling Company LEASE: Cactus Queen Unit AELL #: FOCTAGE: 330' fml & 2310' fml SEC-TWN-RNG, COUNTY, STATE: 34-125-34E, Chaves County, New Mexico SPLO DATE: 9-Aug-65 COMPLETION DATE: 1-Oct-85 CURRENT STATUS: Active injection well - Queen PROFUSED STATUS: Active injection well - Queen	
CASING S ZE: 8.625 INCHES	CASING SIZE: 5.500 INCLES CASING WEIGHT: 14.000 FOUNDS FOOT CASING GRADE: J-55 DEPTH SET: 3.033 FEET CEMENTED USED: 250 SACKS TOP OF CEMENT: 1.640 FEET CETERMINED BY: tomp survey HOLE SIZE: 7.875 INCHES TOTAL DEPTH: 3.100 FEET PLUSGED BACK TO: 3.083 FEET
INJECTION OR PRODUCING INTERVAL (NTERVAL TOP) COMMENTS: Perforated PREVIOUS STIMULATION: 750 guillons of 15% HCL ucid plus 15,000 guillo PROPOSED STIMULATION: None	
INJECTION TUBING (if an injection well) TUBING SIZE: 2.375 INCHES FACKER: Aluminum bronze tension pucker	UNING: plastic DEPTH TO SE SET: 2.921 FEE
OTHER DATA 1. Name of injection or producing interval. 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 curpose was the well originally drilled? This well was originally drilled as a Queen producing well. 4. Has well ever peen perforated in any other zones? No List all such perforated intervals and give plugging details (backs of None)	cement or anage plug(s) used).
5. Give depth to and name of any overlying and/or underlying oil or gas. There has never been any production from any formation other than this well. 6. If well is plugged and abandoned, list details of plugging and attach s.	the Gueen in the area surrounding
Not applicable.	

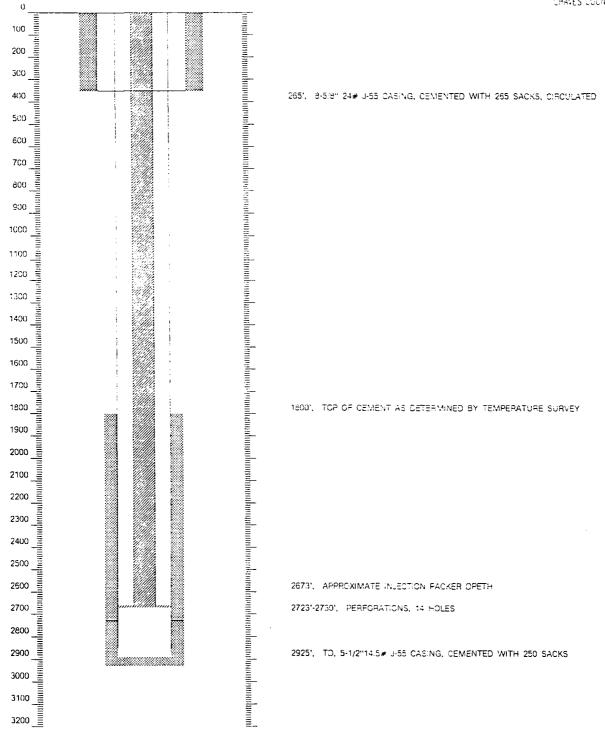
I				
l				
l		Yates Drilling Company		
<u> </u>		Cactus Queen Unit		
	WELL #:			
SSS		330' fnl & 1980' fel	ico	
SEC-TWN-F		34-12S-34E, Chaves County, New Mex	nco	
	SPUD DATE: COMPLETION DATE:	11-Feb-85 20-Mar-85		
		Active producing well - Queen		
		Active producing well - Queen		·
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SUI	RFACE CASING		PRODUCTION CASING	
II	0.000	a cos illovido	***	E 500 (110) ==
11	CASING SIZE:	8.625 INCHES 24.000 POUNDS/FCOT	CASING SIZE:	
1	CASING GRADE:	24.000 POUNDS/FCOT	CASING WEIGHT: CASING GRADE:	
ii	DEPTH SET	433 FEFT	DEPTH SET:	3.094 FEET
I	CEMENTED USED:	433 FEET 300 SACKS 0 FEET	CEMENTED USED:	410 SACKS
II	TOP OF CEMENT:	O FEET	TOP OF CEMENT:	1,900 FEET
I	DETERMINED BY:	circulate 12.250 INCHES	DETERMINED BY:	CSL
K	HOLE SIZE:	12.250 NCHES	HOLE SIZE:	7.875 INCHES
II.			TOTAL DEPTH:	3.100 FEET
\\			PLUGGED BACK TO:	3.094 FEET
1				
				
1				
[N.	JECTION OR PRODUCING	INTERVAL		
II		: <u>2,987</u> FEET	INTERVAL SOTTOM:	2.993 FEET
1	COMMENTS	: Perforated		
		750 gallons of 15% HCL acid plus 15.	.000 gailons of gelled water, 23.5 tons of C	02
		13,000 pounds of 20/40 sand and 10,0		
P	PROPOSED STIMULATION:	: None		
1				•
1				
IN.	JECTION TUBING (if an ir	njection well)		
		•		
1		: NA INCHES	LINING: NA	
	PACKER		DEPTH TO BE SET: NA	===================================
				
<u> </u>				
1				
^-	HER DATA			
1	THE POIN			
1.	Name of njection or pi	roducing interval.		
"	Queen			
#				
2.	Name of field or pool i	(if applicable).		
	SE Chaves Queen			
				
3.	Is this a new well drille	ed for injection?		
	No.			
1		a wine the well eriocellis dell de		
11	If no feet the	- w is the well commonly delled?		
	If no, for what purpose			
		ly drilled as a Queen producing well.	· · · · · · · · · · · · · · · · · · ·	
4	This well was original			
4.	This well was original	ly drilled as a Queen producing well.		
4.	This well was originall Has well ever been pe	ly drilled as a Queen producing well.		
4.	This well was originall Has well ever been pe	ly drilled as a Queen producing well.	acks of cement or bridge plug(s) used).	
4.	This well was originall Has well ever been pe	ly drilled as a Queen producing well.	acks of cement or bridge slug(s) used).	
4.	This well was originall Has well ever been pe No List all such perforate	ly drilled as a Queen producing well.	acks of cement or bridge plug(s) used).	
	This well was originall Has well ever been pe No List all such perforate None	ly drilled as a Queen producing well. reforated in any other zones? ed intervals and give plugging details (so		
	This well was originall Has well ever been pe No List all such perforate None Give depth to and name	ly drilled as a Queen producing well. Inforated in any other zones? Indicated in any other plugging details (so	I or gas zones (pools) in this area.	
	This well was originall Has well ever been per No List all such perforate None Give depth to and name There has never been	ly drilled as a Queen producing well. Inforated in any other zones? Indicated in any other plugging details (so		
	This well was originall Has well ever been pe No List all such perforate None Give depth to and name	ly drilled as a Queen producing well. Inforated in any other zones? Indicated in any other plugging details (so	I or gas zones (pools) in this area.	
	This well was originall Has well ever been per No List all such perforate None Give depth to and name There has never been	ly drilled as a Queen producing well. Inforated in any other zones? Indicated in any other plugging details (so	I or gas zones (pools) in this area.	
	This well was originall Has well ever been pe No List all such perforate None Give depth to and name There has never been	ly drilled as a Queen producing well. Inforated in any other zones? Indicated in any other plugging details (so	I or gas zones (pools) in this area.	
5.	This well was originall Has well ever been pe No List all such perforate None Give depth to and nam There has never been this well.	ly drilled as a Queen producing well. Inforated in any other zones? Indicated in any other zones?	f or gas zones (pools) in this area, nor than the Queen in the area surrounding	
5.	This well was originall Has well ever been pe No List all such perforate None Give depth to and nam There has never been this well.	ly drilled as a Queen producing well. Inforated in any other zones? Indicated in any other plugging details (so	f or gas zones (pools) in this area, nor than the Queen in the area surrounding	
5.	This well was originall Has well ever been per No List all such perforate None Give depth to and name There has never been this well.	ly drilled as a Queen producing well. Inforated in any other zones? Indicated in any other zones?	f or gas zones (pools) in this area, nor than the Queen in the area surrounding	
5.	This well was originall Has well ever been per No List all such perforate None Give depth to and name There has never been this well.	ly drilled as a Queen producing well. Inforated in any other zones? Indicated in any other zones?	f or gas zones (pools) in this area, nor than the Queen in the area surrounding	

				
	OPERATOR	: Yates Drilling Company		
		: Dave Federal		
		1		
		990' fsl & 990' fwl		
SEC-TWN-R		34-12S-34E, Chaves County, New Me	exico	
	SPUD DATE	: 21-Jan-84		
	COMPLETION DATE			
		Active producing well - Queen		
	PHUPUSED STATUS	: Active producing well - Queen		
Į.				
SUF	RFACE CASING		PRODUCTION CASING	
	CASING SIZE	### 8.625 INCHES ####################################	CASING SIZE: CASING WEIGHT:	5.500 :NCHES
ł	CASING WEIGHT	. 24.000 POUNDS/FQUI	CASING WEIGHT:	14.000 POUNDS/FCOT
	CASING GRADE	368 EEET	CASING GRADE:	2.025 5557
	CEMENTED USED	368 FEET 265 SACKS	DEPTH SET:CEMENTED USED:	250 SACKS
Į.	TOP OF CEMENT	0 FEET	TOP OF CEMENT:	1,800 FEET
	DETERMINED BY	: c:rculate	DETERMINED BY: Tem	D. survey
	HOLE SIZE	12.250 NOHES	HOLE SIZE:	7.875 INCHES
			HOLE SIZE:	2,925 FEET
			PLUGGED BACK TD:	2.925 FEET
			-	
<u> </u>				
IN.I	ECTION OR PRODUCING	INTERVAL		
1143				
	INTERVAL TOP	P:	INTERVAL BOTTOM:	2,730 FEET
	COMMENTS	S: Perforated		
F	REVIOUS STIMULATION		00 gallons gelled water, 5,000 pounds CC2.	
		16,500 pounds of 20/40 sand, 5,000		
II PI	ROPOSED STIMULATION	I: 500-1000 gallons of 7-1/2% HCL to o	clean perforations	
				
li .				
LNI	ECTION TUBING (if an i	injection weil)		
1	·			
1	TUBING SIZE	E: INCHES	UNING: plastic	
4	PACKER	R: Nickel plated tension packer	LINING: plastic DEPTH TO BE SET:	2.673 FEET
!				
-				
H				
071	HER DATA			
	Drilli			
1.	Name of injection or p	producing interval.		
1	Queen	·		
1				
2.	Name of field or pool	(if applicable).		
1	SE_Chaves Queen			
1	le this a annu ii an iii an	lad for injustine?		
] 3.	is this a new well drill No.	ed for injection?		
II	140.			
11	If no, for what purpos	se was the well originally drilled?		
1		lly drilled as a Queen producing well.		
1				
4.		erforated in any other zones?		
1	No		 	
1	Liet all cure manteres	ed intervals and dive suspense details (cacke of comunity or bridge assistance.	
	None	en intervals and give plugging details (sacks of cement or bridge plug(s) used).	
1	HOUSE			
				
5.	Give depth to and har	ne of any overlying and/or underlying i	oil or gas zones (pools) in this area.	
J.			other than the Queen in the area surrounding	
ii .	this well.			
1				
6.	If well is plugged and Not applicable.	abandoned, list details of plugging an	σ attach schematic.	
II.	ног аррисции.			
H				

LEASE: WELL #: FOOTAGE: SEC-TWN-RNG, COUNTY, STATE: SPUD DATE: COMPLETION DATE: CURRENT STATUS:	Yates Drilling Company Dave Federal 2 990' fsl & 990' fwl 34-125-34E. Chaves County, New Mexi 21-Jan-84 9-Feb-84 Active producing well - Queen Active producing well - Queen	со	
CASING WEIGHT: CASING GRADE: DEPTH SET: CEMENTED USED: TOP OF CEMENT:	8.625 INCHES 24.000 POUNDS:FCOT J-55 368 FEET 265 SACAS 0 FEET circulate 12.250 INCHES	PRODUCTION CASING CASING SIZE: CASING WEIGHT: CASING GRADE: DEPTH SET: CEMENTED USED: TOP OF DEMENT: DETERMINED BY: HOLE SIZE: TOTAL DEPTH: PLUGGED SACK TO:	14.000 POUNDS/FCOT J-55 2.925 FEET 250 SACKS 1.800 FEET D. survey
COMMENTS PREVIOUS STIMULATION	2.723 FEET Perforuted		2,730 FEET
INJECTION TUBING (if an in TUBING SIZE PACKER	njection well) 2.375 (NCHES Nickel plated tension eacker	L:NING: <u>clastic</u> CEPTH TO BE SET:	2.673 FEET
This well was originally 4. Has well ever been be	if applicable). In differential for injection? In was the well originally drilled? In y drilled as a Queen producing well. Inforated in any other zones?		
5. Give depth to and nan There has never been this well.	e of any overlying and/or underlying oil any production from any formation oth	er than the Queen in the area surrounding	
6. If well is olugged and Not applicable.	abandoned, list details of plugging and	attach schematic.	

DAVE FEDERAL #2

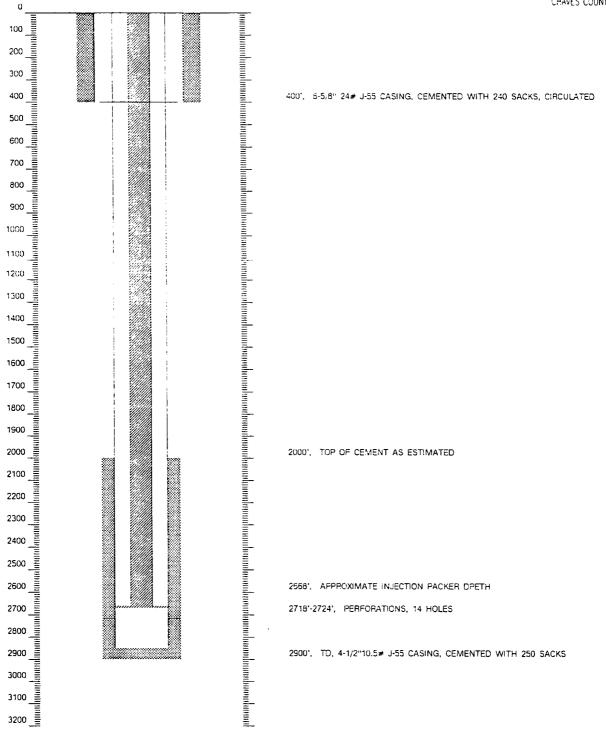
M34-12S-31E CHAVES COUNTY, NM



Ï			
ODER	ATCR; Yates Drilling Company		
	EASE: DeLuna Federal	·	
	EL #: 1		
	TAGE: 1980' fsl & 660' fwl		
	TATE: 34-12S-34E. Chaves County, New	Mexico	· · · · · · · · · · · · · · · · · · ·
	DATE: 2-Jul-82		
	OATE: 1-Sep-82		
	ATUS: Active producing well - Queen		
I i	ATUS: Active injection well - Queen		
		· · · · · · · · · · · · · · · · · · ·	
	<u> </u>		
SURFACE CASING		PRODUCTION CASING	
CASING	SIZE: 8.625 INCHES	CASING SIZE:	4.500 (NCHES
CASING WE	EIGHT: 24.000 POUNDS, FOOT	CASING WEIGHT:	10.500 POUNDS;FCOT
CASING G	iRADE: J-55	CASING GRADE:	J-55
DEPTH	SET: 400 FEET	DEPTH SET:	2.900 FEET
CEMENTED	4 SET: 400 FEET USED: 240 SACKS MENT: 0 FEET	CEMENTED USED:	250 SACKS
TOP OF CE	MENT: 0 FEET	TOP OF CEMENT:	? FEET
DETERMINE	D BY: circulate	DETERMINED BY:	?
HOLE HOLE	SIZE: 12.250 INCHES	HOLE SIZE:	7.875 INCHES
1	<u></u>	HOLE SIZE:	2.900 FEET
1)		FLUGGED BACK TO:	2.900 FEET
			
L	······································		
1			
INJECTION OR PRODU	UCING INTERVAL		
1			
	L TOP: 2,718 FEET	INTERVAL BOTTOM:	2,724 FEET
	MENTS: Perforated		
PREVIOUS STIMUL		10,000 gallons geiled water, 5,000 scf CO2,	
1	7,000 bounds of 20/40 sand, 6,8		
PROPOSED STIMUL	ATION: 500-1000 gallons of 7-1/2% HCL	acid to clean perforations	
1			
			
III. ISSENIA TURNIA	· · · · · · · · · · · · · · · · · · ·		
INJECTION TUBING (it an injection well)		
THRING	2.0175. 2.275 MOUSE	LININOIX	
	3 SIZE: 2.375 INCHES ACKER: Nickel plated tension packer	LINING: <u>plastic</u> DEPTH TO BE SET:	2 600 5557
	ACKER: NICKEI DIALEG LEISION BACKEI		
			2,330
		<u> </u>	
OTHER DATA			
OTHER DATA	n er creducing interval.	<u> </u>	
OTHER DATA	n or producing interval.	<u> </u>	<u> </u>
OTHER DATA 1. Name of njection	n or producing interval.	<u> </u>	
OTHER DATA 1. Name of njection Queen		<u> </u>	
OTHER DATA 1. Name of njectich Cueen 2. Name of field or	pool (if applicable).		
OTHER DATA 1. Name of njection Queen	pool (if applicable).	<u> </u>	
OTHER DATA 1. Name of njection Cueen 2. Name of field or SE Chaves Quee	pool (if applicable), on	<u> </u>	
OTHER DATA 1. Name of njection Cueen 2. Name of field or SE Chaves Quee	pool (if applicable).		
OTHER DATA 1. Name of njection Cueen 2. Name of field or SE Chaves Quee 3. Is this a new we	pool (if applicable), on		
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Quee 3. Is this a new ween No.	pool (if applicable), on		
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Queen 3. Is this a new ween No. If no, for what of	pool (if applicable). en all drilled for injection?		
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Queen 3. Is this a new ween No. If no, for what of	pool (if applicable), on eli drilled for injection?		
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Queen 3. Is this a new ween No. If no, for what of	pool (if applicable), on eli drilled for injection?		
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Quee 3. Is this a new we No. If no, for what of This well was of	pool (if applicable), on eli drilled for injection?		
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Quee 3. Is this a new we No. If no, for what of This well was of	pool (if applicable), on self-drilled for injection? curpose was the well originally drilled? originally drilled as a Queen producing we		
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Quee 3. Is this a new we No. If no, for what of This well was of the No. 4. Has well ever be	pool (if applicable), on self-drilled for injection? curpose was the well originally drilled? originally drilled as a Queen producing we		
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Queen 3. Is this a new we No. If no, for what of this well was of the No. 4. Has well ever be No.	pool (if applicable), en ell drilled for injection? europee was the well originally drilled? originally drilled as a Queen producing we een perforated in any other zones?		
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Queen 3. Is this a new we No. If no, for what of this well was of the No. 4. Has well ever be No.	pool (if applicable), en ell drilled for injection? europee was the well originally drilled? originally drilled as a Queen producing we een perforated in any other zones?	211.	
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Quee 3. Is this a new we No. If no, for what of This well was of the No. 4. Has well ever be No. List all such pe	pool (if applicable), en ell drilled for injection? europee was the well originally drilled? originally drilled as a Queen producing we een perforated in any other zones?	211.	
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Quee 3. Is this a new we No. If no, for what of This well was of the No. 4. Has well ever be No. List all such pe	pool (if applicable), en ell drilled for injection? europee was the well originally drilled? originally drilled as a Queen producing we een perforated in any other zones?	211.	
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Queen 3. Is this a new we No. If no, for what of This well was of the No. List all such per None 5. Give depth to or	pool (if applicable). In all drilled for injection? Durpose was the well originally drilled? Originally drilled as a Queen producing with the perforated in any other zones? Perforated intervals and give plugging detained name of any overlying and/or underlying	ills (sacks of cement or bridge plug(s) used). Ing oil or gas zones (pools) in this area.	
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Queen 3. Is this a new we No. If no, for what of This well was of the No. List all such per None 5. Give depth to or	pool (if applicable). In all drilled for injection? Durpose was the well originally drilled? Originally drilled as a Queen producing with the perforated in any other zones? Perforated intervals and give plugging detained name of any overlying and/or underlying and/or underlying and/or underlying.	ills (sacks of cement or bridge plug(s) used).	
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Queen 3. Is this a new we No. If no, for what of This well was of the No. List all such per None 5. Give depth to or	pool (if applicable). In all drilled for injection? Durpose was the well originally drilled? Originally drilled as a Queen producing with the perforated in any other zones? Perforated intervals and give plugging detained name of any overlying and/or underlying and/or underlying and/or underlying.	ills (sacks of cement or bridge plug(s) used). Ing oil or gas zones (pools) in this area.	
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Queen 3. Is this a new we No. If no, for what of This well was of the No. List all such per None 5. Give death to an There has never	pool (if applicable). In all drilled for injection? Durpose was the well originally drilled? Originally drilled as a Queen producing with the perforated in any other zones? Perforated intervals and give plugging detained name of any overlying and/or underlying and/or underlying and/or underlying.	ills (sacks of cement or bridge plug(s) used). Ing oil or gas zones (pools) in this area.	
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Queen 3. Is this a new we No. If no, for what of This well was of the No. List all such per None 5. Give death to an There has never	pool (if applicable). In all drilled for injection? Durpose was the well originally drilled? Originally drilled as a Queen producing with the perforated in any other zones? Perforated intervals and give plugging detained name of any overlying and/or underlying and/or underlying and/or underlying.	ills (sacks of cement or bridge plug(s) used). Ing oil or gas zones (pools) in this area.	
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Queen 3. Is this a new we No. If no, for what of This well was of the No. List all such per None 5. Give death to an There has never	pool (if applicable). In all drilled for injection? Durpose was the well originally drilled? Originally drilled as a Queen producing with the perforated in any other zones? Perforated intervals and give plugging detained name of any overlying and/or underlying and/or underlying and/or underlying.	ills (sacks of cement or bridge plug(s) used). Ing oil or gas zones (pools) in this area.	
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Queen 3. Is this a new we No. If no, for what of This well was of the No. List all such per None 5. Give death to an Thore has never this well.	pool (if applicable). In all drilled for injection? Surpose was the well originally drilled? Originally drilled as a Queen producing well- energy perforated in any other zones? Internated intervals and give plugging detained name of any overlying and/or underlying been any production from any formation	ills (sacks of cement or bridge plug(s) used). Ing oil or gas zones (pools) in this area. Ing other than the Queen in the area surrounding	
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Queen 3. Is this a new we No. If no, for what of This well was of the No. List all such per None 5. Give depth to an There has never this well.	pool (if applicable). In all drilled for injection? Surpose was the well originally drilled? Originally drilled as a Queen producing well- energy perforated in any other zones? Internated intervals and give plugging detained name of any overlying and/or underlying been any production from any formation	ills (sacks of cement or bridge plug(s) used). Ing oil or gas zones (pools) in this area. Ing other than the Queen in the area surrounding	
OTHER DATA 1. Name of njection Queen 2. Name of field or SE Chaves Queen 3. Is this a new we No. If no, for what of This well was of the No. List all such per None 5. Give death to an Thore has never this well.	pool (if applicable). In all drilled for injection? Surpose was the well originally drilled? Originally drilled as a Queen producing well- energy perforated in any other zones? Internated intervals and give plugging detained name of any overlying and/or underlying been any production from any formation	ills (sacks of cement or bridge plug(s) used). Ing oil or gas zones (pools) in this area. Ing other than the Queen in the area surrounding	

DELUNA FEDERAL #1

L34-12S-31E CHAVES COUNTY, NM



LEASI WELL # FOOTAGI SEO-TWN-RNG, COUNTY, STATI SPUD DATI	: 1980' fsl & 1650' fwl : 34-12S-34E, Chaves County, New Mexico : 7-Feb-84		
	: 1-Mur-84 : Active producing well - Queen : Active producing well - Queen		
WEIGH CASING WEIGH CASING GRAD DEPTH SE CEMENTED USE TOP OF CEMEN CEMENTED SE CEMENTED SE	E: 8.625 INCHES T: 24.000 POUNDS, FOOT E: J-55 T: 374 FEET O: 275 SACKS T: 0 FEET Y: circulate E: 12.250 INCHES	PRODUCTION CASING CASING SIZE: CASING WEIGHT: CASING GRADE: DEPTH SET: CEMENTED USED: TOP OF CEMENT: DETERMINED BY: HOLE SIZE: TOTAL DEPTH: PLUGGED BACK TO:	14.000 PCUNDS/FOOT J-55 2,915 FEET 250 SACKS 1,775 FEET 0. survey
COMMENT	P: 2,773 FEET S: Perforated N: 750 gallons 15% HCL acid plus 20,000 g 15,000 pounds of 20/40 sand, 6,000 pou		2.781 FEET
	injection well) IE: <u>NA</u> INCHES R: <u>NA</u>	EINING: <u>NA</u> CEPTH TO BE SET: <u>NA</u>	FEET
OTHER DATA			
Name of njection or Queen Name of field or pool SE Chaves Queen			
3. Is this a new well dr No. If no, for what purpor	illed for injection? use was the well originally drilled? ully drilled as a Queen producing well.		
No	perforated in any other zones? Ited intervals and give alugging details (back	is of cement or bridge plug(s) used).	
	ame of any overlying and/or underlying oil o en any production from any formation other		
6. If well is plugged and Not applicable.	d apandoned, list details of plugging and att	ach schematic.	

	OPERATOR:	Yates Drilling Company		
	LEASE:			
		660' fnl & 990' fel		
SEC-TWN-R		34-12S-34E. Chaves County, New N	Лехісо	
	COMPLETION DATE:	31-Jul-84 25-Aug-84		
		Active injection well - Cueen		· · · · · · · · · · · · · · · · · · ·
	PHOPOSED STATUS:	Active injection well - Queen		
ļ				
SUF	RFACE CASING		PRODUCTION CASING	
	CASING SIZE:	8.625 INCHES	CASING SIZE:	5.500 INCHES
- 1	CASING WEIGHT:	24.000 POUNDS.FCOT	CASING WEIGHT:	5.500 INCHES 14.000 POUNDS;FCOT
jj	CASING GRADE:	J-55 409 ====	CASING GFADE:	<u>J-55</u>
1	CEMENTED USED:	409 FEET 250 SACKS	DEPTH SET: CEMENTED USED:	250 SACKS
	JUP OF CEMENT:	U FEE!	CEMENTED USED: TOP OF CEMENT:	2,200 FEET
	UETERMINED BY: HOLE SIZE:	circulate 12.250 INCHES	DETERMINED BY: te HOLE SIZÉ:	no survey
			TOTAL DEFTH:	3,100 FEET
			FLUGGED BACK TD:	3.098 FEET
ILAI	ECTION OR PRODUCING	INTERVAL		
	INTERVAL TOP:	2.982 FEET	INTERVAL BOTTOM:	2.989 FEET
₩ _		Perforated		
1	PREVIOUS STIMULATION:	10,900 pounds 20/40 sand and 4,20	gallons of gelled water, 5,000 SCF per barre 20 pounds of 20/40 sand	el N2,
PI	ROPOSED STIMULATION:			
ци	ECTION TUBING (if an in TUBING SIZE PACKER		LINING: plasti CEPTH TO BE SET:	с 2,913 FEET
оті	HER DATA			
1.	Name of injection or pr Queen	roducing interval.		
2.	Name of field or pool	(if applicable).		
3.	Is this a new well drille	ed for injection?		
	If no, for what purpose	e was the well originally crilled? y drilled as a Queen producing well.		
	mas wen was undindi	, Grined as a caceri producing well.		
4.	Has well ever been pe No	rforated in any other zones?		
	List all such perforate	d intervals and give plugging details	(sacks of cement or bridge plug(s) used).	
5.			oil or gas zones (pools) in this area. other than the Queen in the area surrounding	
6.	If well is plugged and Not applicable.	abandoned, list details of plugging ar	nd attach schematic.	
	тот аррисацие.			

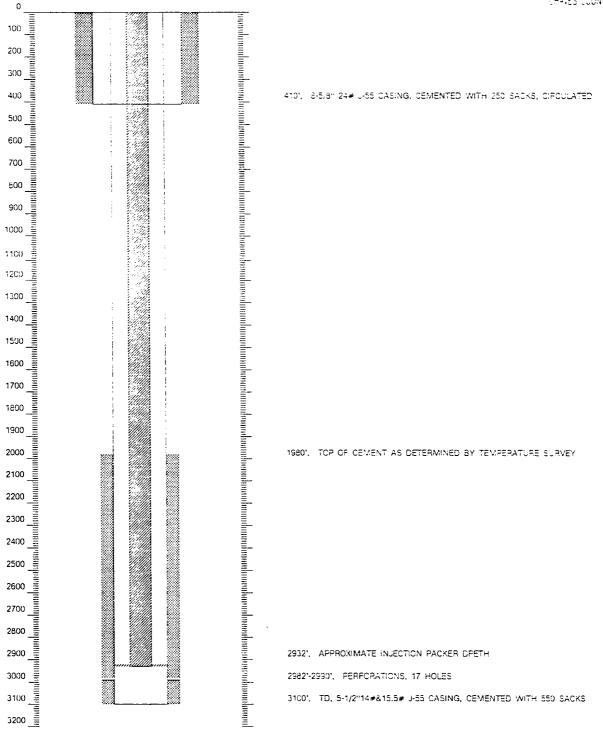
r					
					İ
	OPERATOR	Yates Orilling Company			
1		Garner Federal			
		1			
		660' fnl & 660' fwl			
SEC-TWN-R		3-13S-34E, Chaves County, New Me	xico		
020 111111		14-Feb-84			
	COMPLETION DATE:	1-Mar-84			
		Active producing well - Queen			
		Active producing weil - Queen			
i					
	-,			•	
SUF	RFACE CASING		PRODUCTION CASING		
	CASING SIZE:	8.625 INCHES	CASING SIZE:	5.500 INCHES	
	CASING WEIGHT:	24.000 POUNDS/FOOT	CASING WEIGHT:	14.000 PCUNDS/FOOT	
	CASING GRADE:	J-55 374 FEET	CASING GRADE:	J-55_	
	DEPTH SET:	374 FEET	DEPTH SET:	2,920 FEET	
ţ	TOO OF OSMENT	300 SACKS	CEMENTED USED:	230 SACRS	
H	DETERMINED BY	0 FEE	TOP OF CEMENT:	2,000 FEE1	
l	שבובאיייו יבט פוז	circutate 12.250 NCHES	DETERMINED BY: Ten	no. survey	
ll .	HULE SIZE	. <u>(2.230</u> NORES	HOLE SIZE:		
			TOTAL DEPTH: PLUGGED BACK TO:	2 020 FEET	
			FIUGGED BACK (U)	2,920 FEE	
	<u>`</u>				
LNI	ECTION OR PRODUCING	INTERVAL			
{ }					
11		: <u>2.695</u> FEET	INTERVAL BOTTOM:	2,701 FEET	
		: Perforated			
∦ F	PREVIOUS STIMULATION	: 750 gailons 15% HCL acid plus 30,0			
1		24,000 pounds of 20/40 sand, 12,500	0 pounds of 12/20 sand		
P!	ROPOSED STIMULATION	: None			
1					
<u> </u>					
INJ	ECTION TUBING (if an in	niection well)			
I	TUBING SIZE	: NA INCHES	UNING: NA		
1	PACKER		CEPTH TO BE SET: NA	FEET	
1		·			
<u></u>					
H					
Off	HER DATA				
1 .	Name of investors or o	remining interval			
1.	Name of injection or p Queen	roducing interval.			
1	addin	· · · · · · · · · · · · · · · · · · ·			
2.	Name of field or pool	(if applicable).			
3.	SE Chaves Queen	• • • •			
				 	•
3.	Is this a new weil drille	ed for injection?			
	No.			·	
1		•			
		e was the well originally drilled?			
	This well was original	ly drilled as a Queen producing well.			
					
1	Management of the Community of the Commu	oferented in one in the control of			
4.		rforated in any other zones?			
! }	No				•
	List all such perforate	ed intervals and owe bijugging datalis ((sacks of cement or bridge plug(s) used).		
-	None	to intolvers and give plugging details ((Such 3 of Centent St unage play(s) used).		
1		······································			•
11					•
5.	Give depth to and nam	ne of any overlying and/or underlying	oil or gas zones (pools) in this area.		
11			other than the Queen in the area surrounding		
11	this well.				•
ĮĮ.					•
1					
ll .					-
6.		abandoned, list details of plugging an	d attach schematic.		
li .	Not applicable.			· · · · · · · · · · · · · · · · · · ·	
11					
1	·		 		-

					
		Yates Drilling Company			1
	LEASE: WELL #:	Garner Federal 2			
		2310' fsl & 2310' fel			-
SEC-TWN-RN		34-12S-34E. Chaves County, New Mexic	0		
1		29-Apr-84			
1	COMPLETION DATE: CUBRENT STATUS:	Active producing well - Queen			1
		Active injection well - Gueen			- 1
<u> </u>				····	=
SURF	FACE CASING		PRODUCTION CASING		
	04014-0-0175	0.005 (\$10.000)	04600 0775	5.500 (1)(1)(50	
1	CASING SIZE:	8.625 INCHES 24.000 POUNDS/FOOT	CASING SIZE:	14.000 POUNDS, FCOT	
	CASING GRADE	J-55	CASING GRADE:	J-55	
	DEPTH SET:	410 FEET	CASING GRADE:	3.098 FEET	
	CEMENTED USED:	J-55 410 FEET 250 SACKS 0 FEET	CEMENTED USED: TOP OF CEMENT:	550 SACKS	
	DETERMINED BY:	circulate	CETERMINED BY:	1,992 FEE!	
	HOLE SIZE	12.250 INCHES	HOLE SIZE:	7.875 INCHES	
			TOTAL DEPTH:	3,100_FEET	ļ
			PLUGGED BACK TD:	3.098 FEET	
	ATAN AA 800000	INTERIOR.			
INJE	CTION OR PRODUCING	INTERVAL			
	INTERVAL TOP	2,982 FEET	NTERVAL BOTTOM:	2 990 FEFT	
ii		Perforated		2,330	
PF	REVIOUS STIMULATION	750 gallons 15% HCL acid plus 25,000			
00	IODOSED STIMILI YTION	16,500 pounds of 20/40 sand, 1,700 pc : 500-1000 gallons of 7-1/2% HCL to clea			
	OFOSED STIVIOEATION	. 300-1000 gallons of 7-1/2/a McE to this	an pertorations		

1					
INJE	CTION TUBING (if an i	niection well)			
1	TUBING SIZE	: 2.375 INCHES	LINING: plasti		
	PACKEH	: Nickel plated tension packer	DEPTH TO BE SET:	2.932 FEE!	
				·	
	IER DATA				
	EN SAIN				
1. 1	Name of injection or p	roducing interval.			
	Queen				
	Name of field or post	(if applicable)			
2. '	SE Chaves Queen	(ii applicacie).			
3. 1	Is this a new well drille	ed for injection?			
	No.				
1	If no, for what purpos	e was the well originally drilled?			
		ly drilled as a Queen producing well.			
4	Has well ever been ne	rforated in any other zones?			
1	No	riorates in any other zones.			
ii.					
		ed intervals and give plugging details (sai	cks of cement or pridge plug(s) used).		
	None				
				 	
5.		ne of any overlying ana/or underlying oil			
H		any production from any formation other	er than the Queen in the area surrounding		
H	this well.				
1					
6.	If well is plugged and Not applicable.	abandoned, list details of plugging and a	attach schematic.		
1	тот арупсаріс.		· · · · · · · · · · · · · · · · · · ·		
1					
				•	

GARNER FEDERAL #2

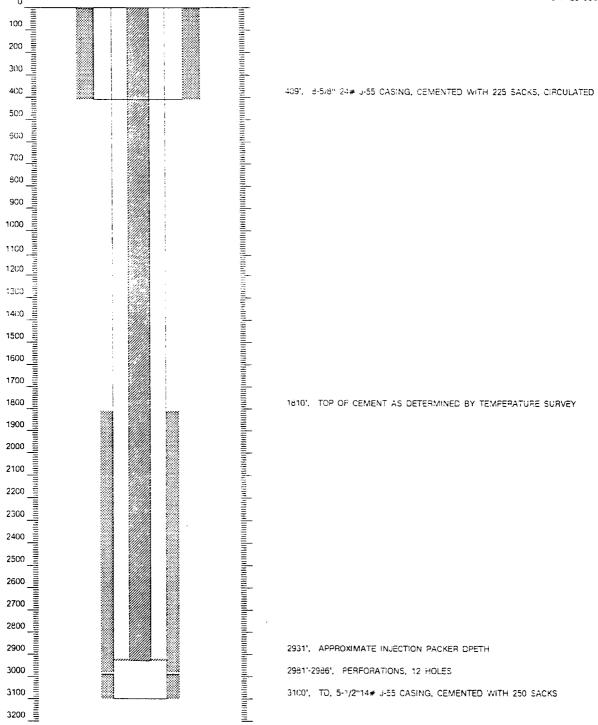
J34-12S-31E CHAVES COUNTY, NA



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					- 1
ı.					
ll .		: Yates Drilling Company			
		: Garner Federal			[]
		: 3			- 1
1		: 1980' fnl & 1980' fel			- 1
		: 34-12S-34E, Chaves County, New M	lexico		1
	SPUD DATE	: 2-Jul-84			l l
II	COMPLETION DATE				
1		: Active producing well - Queen			1
1	PROFOSED STATUS	: Active injection well - Queen			
1					
IL					
ľ					
1					
1	SURFACE CASING		PRODUCTION CASING		
I					l
11	CASING SIZE	: 8.625 INCHES : 24.000 POUNDS,FOOT	CASING SIZE:	5.500 INCHES	
Ш	CASING WEIGHT	: 24,000 POUNDS,FOOT	CASING WE'GHT:	14.000 POUNDS/FOOT	1
11	CASING GRADE	.: J-55	CASING GRADE:	J-55	
1	DEPTH SET	: 408 FEET	DEPTH SET:	3,100 FEET	}
I	CEMENTED USED	: J-55 : 408 FEET : 225 SACKS : 0 FEET	CASING GRADE: DEPTH SET: CEMENTED USED:	250 SACKS	
l	TOP OF CEMENT	: 0 FEET	TOP OF CEMENT:	1.910 FEET	- 1
li.	DETERMINED BY	: circulate	DETERMINED BY: tem	D. SURVEY	1
1	HOLE SIZE	: <u>circulate</u> : <u>12.250</u> INCHES	HOLE SIZE: TOTAL DEPTH: PLUGGED SACK TO:	7.875 INCHES	
			TOTAL DEPTH:	3.100 FFFT	
I			PLUGGED SACK TO:	3 100 FFET	
1				3,100	
Ш					
١ř					
1	INJECTION OR PRODUCING	INTERVAL			
II					
1	-NTERVAL TO	2: 2,981 FEET	INTERVAL BOTTOM:	2 086 ====	
I		S: Perforated	THE SOLICIAL	2,303	
11			200 gallons gelled water, 5,000 scf CO2,		
1	FREVIOUS STRIVIDER NO.	15,000 pounds of 20/40 sand, 1,700			
1	DRODOSED STAMUL STON	1: 500-1000 gailons of 7-1/2% HCL aci			
I	PROPOSED S INICIANCA	1. 300-1000 dailons of 7-1/2% HCL dc.	id to clean periorations	······································	
II					
炸					
1					
1	MUSCOTON TURNO CO	(-1,-4)			
I	INJECTION TUBING (if an	njection well)			
Н	71101NO 017	5. 0.375 (NOVIES	(N N O - -		
I	IUBING SIZE	E: 2.375 INCHES R: Nickel plated tension packer	LINING: plastic		
1	PACKER	C Nickel plated tension packer	DEPTH TO BE SET:	2,931 FEE1	
1					
ľ					
1					
1					
1	OTHER DATA				
11					
1	 Name of injection or ; 	producing interval.			
	 Name of injection or ; Queen 	producing interval.			
	Queen		- 		
	•		· · · · · · · · · · · · · · · · · · ·		
	Queen				
	Queen 2. Name of field or pool				
	Queen 2. Name of field or pool	(if applicable).			
	Queen 2. Name of field or pool SE Chaves Queen	(if applicable).			
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well arili	(if applicable).			
	2. Name of field or pool SE Chaves Queen 3. Is this a new well arit No.	(if applicable).			
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well drill No. If no, for what purpos	(if applicable).			
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well drill No. If no, for what purpos	(if applicable). led for injection? se was the well originally drilled?			
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well drill No. If no, for what purpos	(if applicable). led for injection? se was the well originally drilled?			
	2. Name of field or pool SE Chaves Queen 3. Is this a new well drift No. If no, for what purpos This well was original	(if applicable). led for injection? se was the well originally drilled?			
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well drift No. If no, for what purpose This well was origina 4. Has well ever been pool.	(if applicable). led for injection? se was the well originally drilled? lly drilled as a Queen producing well.			
	2. Name of field or pool SE Chaves Queen 3. Is this a new well drift No. If no, for what purpos This well was original	(if applicable). led for injection? se was the well originally drilled? lly drilled as a Queen producing well.			
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well drill No. If no, for what purpos This well was original 4. Has well ever been purpos No.	(if applicable). led for injection? se was the well originally drilled? lity drilled as a Queen producing well. erforated in any other zones?	(Sacks of cement or bridge clud(s) used)		
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well ant No. If no, for what purpos This well was origina 4. Has well ever been proposed the perforation of the perf	(if applicable). led for injection? se was the well originally drilled? lity drilled as a Queen producing well. erforated in any other zones?	(sacks of cement or bridge plug(s) used).		
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well drill No. If no, for what purpos This well was original 4. Has well ever been purpos No.	(if applicable). led for injection? se was the well originally drilled? lity drilled as a Queen producing well. erforated in any other zones?	(sacks of cement or bridge plug(s) used).		
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well ant No. If no, for what purpos This well was origina 4. Has well ever been proposed the perforation of the perf	(if applicable). led for injection? se was the well originally drilled? lity drilled as a Queen producing well. erforated in any other zones?	(sacks of cement or bridge plug(s) used).		
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well drill No. If no, for what purpos This well was original 4. Has well ever been proposed to the perforations.	(if applicable). led for injection? se was the well originally drilled? lly drilled as a Queen producing well. erforated in any other zones? ed intervals and give plugging details			
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well ant No. If no, for what purpos This well was origina 4. Has well ever been proposed to the perforat None 5. Give depth to and name	(if applicable). led for injection? se was the well originally drilled? lly drilled as a Queen producing well. erforated in any other zones? ed intervals and give plugging details me of any overlying and/or underlying	oil or gas zones (pools) in this area.		
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well only No. If no, for what purpos This well was originated the perforation of the perforation o	(if applicable). led for injection? se was the well originally drilled? lly drilled as a Queen producing well. erforated in any other zones? ed intervals and give plugging details me of any overlying and/or underlying			
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well ant No. If no, for what purpos This well was origina 4. Has well ever been proposed to the perforat None 5. Give depth to and name	(if applicable). led for injection? se was the well originally drilled? lly drilled as a Queen producing well. erforated in any other zones? ed intervals and give plugging details me of any overlying and/or underlying	oil or gas zones (pools) in this area.		
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well only No. If no, for what purpos This well was originated the perforation of the perforation o	(if applicable). led for injection? se was the well originally drilled? lly drilled as a Queen producing well. erforated in any other zones? ed intervals and give plugging details me of any overlying and/or underlying	oil or gas zones (pools) in this area.		
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	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well ant No. If no, for what purpos This well was original 4. Has well ever been punched and None 5. Give depth to and har There has never been this well.	(if applicable). led for injection? se was the well originally drilled? lity drilled as a Queen producing well. erforated in any other zones? ed intervals and give plugging details me of any overlying and/or underlying in any production from any formation.	oil or gas zones (pools) in this area, other than the Queen in the area surrounding		
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well only No. If no, for what purpos This well was originated with the second of the seco	(if applicable). led for injection? se was the well originally drilled? lly drilled as a Queen producing well. erforated in any other zones? ed intervals and give plugging details me of any overlying and/or underlying	oil or gas zones (pools) in this area, other than the Queen in the area surrounding		
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well ant No. If no, for what purpos This well was original 4. Has well ever been punched and None 5. Give depth to and har There has never been this well.	(if applicable). led for injection? se was the well originally drilled? lity drilled as a Queen producing well. erforated in any other zones? ed intervals and give plugging details me of any overlying and/or underlying in any production from any formation.	oil or gas zones (pools) in this area, other than the Queen in the area surrounding		
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well only No. If no, for what purpos This well was originated with the second of the seco	(if applicable). led for injection? se was the well originally drilled? lity drilled as a Queen producing well. erforated in any other zones? ed intervals and give plugging details me of any overlying and/or underlying in any production from any formation.	oil or gas zones (pools) in this area, other than the Queen in the area surrounding		
	Queen 2. Name of field or pool SE Chaves Queen 3. Is this a new well only No. If no, for what purpos This well was originated with the second of the seco	(if applicable). led for injection? se was the well originally drilled? lity drilled as a Queen producing well. erforated in any other zones? ed intervals and give plugging details me of any overlying and/or underlying in any production from any formation.	oil or gas zones (pools) in this area, other than the Queen in the area surrounding		

GARNER FEDERAL #3

G34-12S-31E CHAVES COUNTY, NM



OPERATOR: Yates Drilling Compuny LEASE: Garner Federal WELL #: 4 FOOTAGE: 330' fst & 1980' fel SEC-TWN-RNG, CCUNTY, STATE: 34-12S-34E. Chaves County, New Mexico SPUD DATE: 24-Jun-84 COMPLETION DATE: 1-Aug-84 CURRENT STATUS: Inactive producing well - Queen PRCPOSED STATUS: Inactive producing well - Queen	
SURFACE CASING SIZE: 8.525 INCHES CASING SIZE: 5.500 INCHES	
INJECTION OR PRODUCING INTERVAL INTERVAL TCP: 2.989 FEET INTERVAL BOTTOM: 2.997 FEET COMMENTS: Perforated PREVIOUS STIMULATION: 1000 gaillons 15% HCL ucid plus 35,000 gaillons gelled water, 25% CO2, 43,000 pounds of 20/40 sand, 22,000 pounds of 12/20 sand PROPOSED STIMULATION: None	
INJECTION TUBING (if an injection well) TUBING SIZE: NA INCHES LINING: NA PACKER: NA FEET	
OTHER DATA	
1. Name of injection or producing interval. Queen	
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 crilled? This well was originally drilled as a Queen producing well.	
4. Has well ever been perforated in any other zones? No.	
List all such perforated intervals and give plugging details (sacks of cement or bridge clug(s) used). None	
 Give depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. There has never been any production from any formation other than the Queen in the area surrounding this well. 	
If well is plugged and abandoned, list details of plugging and attach schematic. Not applicable.	

CASING SIZE S.625 NCHES CASING SIZE S.500 NCHES
LEASE: Garner Federal WELL #: 5 5 5 5 5 5 5 5 5
WELL #:
SEC-TWN-RNG, COUNTY, STATE: 3-13S-34E, Chaves County, New Mexico SPUD DATE: 25-Jul-84 COMPLETION DATE: 14-Aug-84 CURRENT STATUS: Active producing well - Queen PROPOSED STATUS: Active producing well - Queen PROPOSED STATUS: Active producing well - Queen PROPOSED STATUS: Active producing well - Queen PRODUCTION CASING SURFACE CASING SIZE: 8.625 INCHES CASING SIZE: 5.500 INCHES CASING WEIGHT: 14.000 POUNDS.FCOT CASING WEIGHT: 14.000 POUNDS.FCOT CASING GRADE: 3-55 CASING GRADE: 3
SEC-TWN-RNG, COUNTY, STATE: 3-13S-34E, Chaves County, New Mexico SPUD DATE: 25-Jul-84 COMPLETION DATE: 14-Aug-84 CURRENT STATUS: Active producing well - Queen PROPOSED STATUS: Active producing well - Queen
SPUD DATE: 25-Jul-84 14-Aug-84 COMPLETION DATE: 14-Aug-84 CURRENT STATUS: Active producing well - Queen PROPOSED STATUS: Active producing well - Queen PROPOSED STATUS: Active producing well - Queen PRODUCTION CASING SURFACE CASING SIZE: 8.625 INCHES CASING SIZE: 5.500 INCHES CASING WEIGHT: 24.000 POUNDS, FCOT CASING WEIGHT: 14.000 POUNDS, FCOT CASING GRADE: J-55 CASING GRADE: J-
COMPLETION DATE:
SURFACE CASING
SURFACE CASING PRODUCTION CASING CASING SIZE: 8.525 INCHES CASING SIZE: 5.500 INCHES CASING WEIGHT: 24.000 POUNDS, FCOT CASING WEIGHT: 14.000 POUNDS, FCOT CASING GRADE: J-55 CASING GRADE: J-55 DEPTH SET: 371 FEET DEFTH SET: 2.991 FEET CEMENTED USED: 230 SACKS CEMENTED USED: 235 SACKS TOP OF CEMENT: 0 FEET TOP OF CEMENT: 1.910 FEET
CASING SIZE: 8.625 INCHES CASING SIZE: 5.500 INCHES CASING WEIGHT: 24.000 POUNDS, FCOT CASING WEIGHT: 14.000 POUNDS, FCOT CASING GRADE: J-55 CASING GRADE: J-55 DEPTH SET: 371 FEET DEFTH SET: 2.991 FEET CEMENTED USED: 230 SACKS CEMENTED USED: 235 SACKS TOP OF CEMENT: 0 FEET TOP OF CEMENT: 1.910 FEET
CASING SIZE: 8.625 INCHES CASING SIZE: 5.500 INCHES CASING WEIGHT: 24.000 POUNDS, FCOT CASING WEIGHT: 14.000 POUNDS, FCOT CASING GRADE: J-55 CASING GRADE: J-55 DEPTH SET: 371 FEET DEFTH SET: 2.991 FEET CEMENTED USED: 230 SACKS CEMENTED USED: 235 SACKS TOP OF CEMENT: 0 FEET TOP OF CEMENT: 1.910 FEET
CASING SIZE: 8.625 INCHES CASING SIZE: 5.500 INCHES CASING WEIGHT: 24.000 POUNDS, FCOT CASING WEIGHT: 14.000 POUNDS, FCOT CASING GRADE: J-55 CASING GRADE: J-55 DEPTH SET: 371 FEET DEFTH SET: 2.991 FEET CEMENTED USED: 230 SACKS CEMENTED USED: 235 SACKS TOP OF CEMENT: 0 FEET TOP OF CEMENT: 1.910 FEET
CASING SIZE: 8.625 INCHES CASING SIZE: 5.500 INCHES CASING WEIGHT: 24.000 POUNDS, FCOT CASING WEIGHT: 14.000 POUNDS, FCOT CASING GRADE: J-55 CASING GRADE: J-55 DEPTH SET: 371 FEET DEFTH SET: 2.991 FEET CEMENTED USED: 230 SACKS CEMENTED USED: 235 SACKS TOP OF CEMENT: 0 FEET TOP OF CEMENT: 1.910 FEET
CASING SIZE: 8.625 INCHES CASING SIZE: 5.500 INCHES CASING WEIGHT: 24.000 POUNDS, FCOT CASING WEIGHT: 14.000 POUNDS, FCOT CASING GRADE: J-55 CASING GRADE: J-55 DEPTH SET: 371 FEET DEFTH SET: 2.991 FEET CEMENTED USED: 230 SACKS CEMENTED USED: 235 SACKS TOP OF CEMENT: 0 FEET TOP OF CEMENT: 1.910 FEET
CASING WEIGHT: 24.000 POUNDS, FCOT CASING WEIGHT: 14.000 POUNDS, FCOT CASING GRADE: J-55 CASING GRADE: J-55 CEPTH SET: 371 FEET CEPTH SET: 2,991 FEET CEMENTED USED: 230 SACKS CEMENTED USED: 235 SACKS TOP OF CEMENT: 0 FEET TOP OF CEMENT: 1,910 FEET
CASING GRADE: J-55 CASING GRADE: J-55 DEPTH SET: 371 FEET DEFTH SET: 2.891 FEET CEMENTED USED: 230 SACKS CEMENTED USED: 235 SACKS TCP OF CEMENT: 0 FEET TCP OF CEMENT: 1.910 FEET
CASING GRADE: J-55 CASING GRADE: J-55 DEPTH SET: 371 FEET DEFTH SET: 2.891 FEET CEMENTED USED: 230 SACKS CEMENTED USED: 235 SACKS TOP OF CEMENT: 0 FEET TOP OF CEMENT: 1.910 FEET
DEPTH SET: 371 FEET DEFTH SET: 2,991 FEET CEMENTED USED: 230 SACKS CEMENTED USED: 235 SACKS TOP OF CEMENT: 0 FEET TOP OF CEMENT: 1,910 FEET
CEMENTED USED: 230 SACKS CEMENTED USED: 235 SACKS TOP OF CEMENT: 0 FEET CP OF CEMENT: 1:910 FEET DETERMINED BY: circulate CEMENT CP OF
TOP OF CEMENT: 0 FEET TOP OF CEMENT: 1.910 FEET DETERMINED BY: circulate DETERMINED BY: Tamp of the company
OFTERMINED BY: Groupte DETERMINED BY: Temm stroom
1015 CIST 100 FT
HOLE SIZE: 12.250 NOHES -OLE SIZE: 7.875 INCHES
HOLE SIZE: 12.250 NOHES HOLE SIZE: 7.875 INCHES TOTAL DEPTH: 2.900 FEE PLUGGED SACK TO: 2.891 FEET
2.331 FEE
ALLEADAN OF PROCESSION INTERNAL
INJECTION OR PRODUCING INTERVAL
INTERVAL TOP: 2,773 FEET ATTERVAL BOTTOM: 2,789 FEET
INTERVAL TCP: 2,773 FEET ATTERVAL BOTTOM: 2,789 FEET COMMENTS: Perforated
PREVIOUS STIMULATION: 1500 gallons 15% HCL acid plus 30,000 gallons gelled water, 25% N2,
14,500 pounds of 20/40 sund, 13,500 pounds of 12/20 sund
PROPOSED STIMULATION: None
INJECTION TUBING (if an injection well)
TURNS 637, NA
TUBING SIZE: NA NCHES UNING: NA PACKER: NA SEPTH TO SE SET: NA FEET
SEPTE TO SE SET, MA PER
OTHER DATA
Name of injection or producing interval.
Name of injection or producing interval. Queen
1. Name of injection or producing interval. Queen 2. Name of field or pool (if applicable).
Name of injection or producing interval. Queen
1. Name of injection or producing interval. Queen 2. Name of field or pool (if applicable). SE Chaves Queen
1. Name of injection or producing interval. Queen 2. Name of field or pool (if applicable).
1. Name of injection or producing interval. Queen 2. Name of field or pool (if applicable). SE Chaves Queen 3. Is this a new well drilled for injection?
1. Name of injection or producing interval. Queen 2. Name of field or pool (if applicable). SE Chaves Queen 3. Is this a new well drilled for injection?
1. Name of injection or producing interval. Queen 2. Name of field or pool (if applicable). SE Chaves Queen 3. Is this a new well drilled for injection? No.
1. Name of injection or producing interval. 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?
1. Name of injection or producing interval. 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 originally drilled as a Queen producing well.
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1. Name of injection or producing interval. 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 originally drilled as a Queen producing well.
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1. Name of injection or producing interval. 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 originally drilled as a Queen producing well. 4. Has well ever been perforated in any other zones? No.
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1. Name of injection or producing interval. 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 originally drilled as a Queen producing well. 4. Has well ever been perforated in any other zones? No List all such perforated intervals and give plugging details (sucks of cement or originally used). None 5. Give depth to and name of any overlying and/or underlying oil or gas zones (pocia) in this area. There has never been any production from any formation other than the Queen in the area surrounding
1. Name of injection or producing interval. 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 originally drilled as a Queen producing well. 4. Has well ever been perforated in any other zones? No List all such perforated intervals and give plugging details (sucks of cement or pridge plug(s) used). None 5. Give depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. There has never been any production from any formation other than the Queen in the area surrounding this well.
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	Yates Drilling Company		
	Tao Federal		
	330' fnl & 1980' fel		
	3-135-34E, Chaves County, New Mexi	со	
SPUD CATE:	22-May-84		
COMPLETION DATE:			
	Active producing well - Cucen		
PHCPOSED STATUS:	Active producing well - Queen		
BURSASS 015/10			
SURFACE CASING		PRODUCTION CASING	
CASING SIZE	8.625 INCHES	CASING SIZE:	5.500 INCHES
	2 POUNDS,FOOT	CASING WEIGHT:	? POUNDS/FOOT
CASING GRADE	?	CASING GRADE:	?
DEPTH SET	566 FEET 225 SACKS	DEPTH SET:	3,114 FEET
CEMENTED USED	225 SACKS	CEMENTED USED:	252 SACKS
DETERMINED BY	? FEET ?	TOP OF CEMENT:	<u>?</u>
HOLE SIZE	12.250 INCHES	HOLE SIZE:	
1		TOTAL DEPTH:	3,114 FEET
		PLUGGED BACK TD:	3.114 FEET
		-	-
			
1			
INJECTION OR PRODUCING	INTERVAL		
1.775	2002 557		2 222 555
• 1	: 2,983 FEET	INTERVAL BOTTOM:	3,003 FEET
	: 500 dattens 15% HCL acid plus 20.00	O gallons called writer	
17.27.003 37.11.0341.010	20,000 counds of sand,	o galloris delled water,	
PROPOSED STIMULATION			
<u> </u>			
			
\			
INJECTION TUBING (if an i	njection weil)		
H			
	: NA INCHES	UNING: NA	
PACKER	: <u>NA</u>	DEPTH TO BE SET: NA	FEET
OTHER DATA			
OTHER DATA			
Name of njection or s	roducing interval.		
Queen			
	(6		
2. Name of field or pool SE Chaves Queen	(ii applicable).		
SE Chaves Guden			
3. Is this a new well drille	ed for injection?		
No.			
If no for what average	e was the well originally drilled?		
	e was the well originally drilled? ly drilled as a Queen producing well.		
This W. ii Was Chana	y drined do a docen producing with		
31	rforated in any other zones?		
No No	 		
List all such perforate	ed intervais and dive plupping details (s	cacks of cement or bridge plug(s) used).	
None			
E 00000 20000 00000	no of any quarters and to the second	il or one topon (spele) in this series	
	ne of any overlying and/or underlying o	il or gas zones (pools) in this area. her than the Queen in the area surrounding	
this well.	any production from any formation of	nor alan the desert in the area surrounding	
6. If well is plugged and Not applicable.	abandoned, list details of plugging and	attach schematic.	
ног аррисавие.			
II .			

Maria	er ylelle	<u> </u>							
	!	!	1	1 QTR	t		t t		i
A-8		1 510	UNIT	OF	1		1		:
SEC	: TWN	RNG	: LTR	TINU:	i 	מד	` 	TYPE	† †
24	1125	:31E	1K	17	!	148	IDOM.		114793
24	1125	131E	(P	17	1	160	:DOM.		L6649
26	1128	131E	ΙE	17	;	166	:DOM.	& STK	L6746
V26	1128	:31E	11	17	17		HIRR.		112117
V26	1123	131E	:0	17	1	178	ICOM.	(OIL & GAS)	LL9566
V26	1128	131E	10	17	;	198	:COM	DOM. & STK	IL6749
27	1125	:31E	114	17	1	160	:DOM.	& STK	L6650
~ 35	1128	31E	!F	I NW	;	55	:DOM.		L4170
~ 35	1128	131E	:IJOP	17	17		17		1L2932
1	:138	131E	1K	SE	1	190	! WF		1L3460
.1	1138	IJIE	16	SE	1	220	! WF		HL3461
.1	1138	:31E	: M	ISW	;	190	COM.	& STK	L3837X
1	1138	IJIE	: M	1 SW	;	165	COM.	& STK	LE3837
2	135	:31E	; H	I SW	1	165	DEC.		1L3834
2	1138	31E	: H	17	17		! WF		11,4295
2	1138	131E	! H	INE	1	196	ISRO		LE3914
2	:138	:31E	: H	! SW	ŀ	165	DEC.		1L3835
2	133	31E	; F.	ISE	17		17		113806
2	:139	31E	! I	INE	;	216	:SRO		L2745
12	1135	:31E	l A	17	;	217	ISRO		1L3460
13	1138	131E	: ABCD	17	17		I OMD	•	1L2933
24	135	:31E	; H	INE	;	196	:IND.		L3914
35	1138	:31E	; F	ISW	-17		IDOM.		11.2849

TRETOLITE'

Chemicals and Services



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Reply to: P.O. Box FF

Artesia, New Mexico 88210 (505) 746-3588 Phone (505) 746-3580 Fax

WATER ANALYSIS REPORT

Company : YATES DRILLING Date : 11/09/92
Address : ARTESIA, NEW MEXICO Date Sampled : 11/06/92
Lease : WILLIAMS RANCH Analysis No. : 215
Well : RANCH HOUSE
Sample Pt. : TAP

	ANALYSIS		mg/L		* meq/L
1.	pH 6.8				
2.	H2S 0	_			
3.	Specific Gravity 1.00	Ü			
4.	Total Dissolved Solids		409.9		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity	(CaCO3)			
10.	Methyl Orange Alkalinity (
11.	Bicarbonate	HCO3	170.0	HCO3	2.8
12.	Chloride	Cl	106.0	Cl	3.0
13.	Sulfate	S04	25.0	SO4	0.5
14.	Calcium	Ca	96.0	Ca	4.8
15.	Magnesium	Mg	24.4	Mg	2.0
16.	Sodium (calculated)	Ná	-11.4	Nã	-0.5
17.	Iron	Fe	0.0		
18.	Barium	Ba	0.0		
	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		340.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt	X meq/L	= mg/L
5 *Ca < *HCO3 3 /> 2 *Mg> *SO4 1 -0 *Na> *Cl 3	Ca (HCO3) 2 CaSO4 CaC12 Mg (HCO3) 2 MgSO4 MgC12	81.0 68.1 55.5 73.2 60.2 47.6	2.8 0.5 1.5	226 35 82
Saturation Values Dist. Water 20 C CaCO3 13 mg/L CaSO4 * 2H2O 2090 mg/L BaSO4 2.4 mg/L	NaHCO3 Na2SO4 NaCl	84.0 71.0 58.4	1.3	12

REMARKS:

----- L. MALLETT / FILE

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WATER ANALYSIS REPORT

Company : YATES DRILLING Date : 11/09/92
Address : ARTESIA, NEW MEXICO Date Sampled : 11/06/92
Lease : TIVIS RANCH Analysis No. : 216
Well : RANCH HOUSE
Sample Pt. : TAP

	ANALYSIS		mg/L		* meq/L
1. 2.	pH 7.0 H2S 0				
3.	Specific Gravity 1.000				
4.	Total Dissolved Solids		334.8		
5.	Suspended Solids		NR		
	Dissolved Oxygen Dissolved CO2		NR NR		
	Oil In Water		NR NR		
9.	Phenolphthalein Alkalinity	(CaCO3)	III		
10.	Methyl Orange Alkalinity (C				
	Bicarbonate	нсоз	146.0	HCO3	2.4
12.	Chloride	Cl	85.0	Cl	2.4
13.	Sulfate	SO4	25.0	SO4	0.5
	Calcium	Ca	88.0	Ca	4.4
15.	Magnesium	Mg	34.1	Mg	2.8
16.	Sodium (calculated)	Na	-43.3	Na	-1.9
17.	Iron	Fe	0.0		
18.	Barium	Ba	0.0		
	Strontium	. Sr	0.0		
20.	Total Hardness (CaCO3)		360.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt	X meq/L	= mg/L
4 *Ca < *HCO3 2 /> *Mg> *SO4 1 *Na *C1 2	Ca(HCO3)2 CaSO4 CaCl2 Mg(HCO3)2 MgSO4 MgCl2	81.0 68.1 55.5 73.2 60.2 47.6	2.4 0.5 1.5	194 35 82
Saturation Values Dist. Water 20 C CaCO3 13 mg/L CaSO4 * 2H2O 2090 mg/L BaSO4 2.4 mg/L	NaHCO3 Na2SO4 NaCl	84.0 71.0 58.4	0.9	44

REMARKS:

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WATER ANALYSIS REPORT

Company : YATES DRILLING
Address : ARTESIA, NEW MEXICO
Lease : GRAHAM
Well : WINDMILL
Sample Pt. : WELL Date : 11/09/92 Date Sampled : 11/06/92 Analysis No. : 217

	ANALYSIS		mg/L		* meq/L		
1. 2.	pH 7.0 H2S 0						
3.	Specific Gravity 1.000						
4.	Total Dissolved Solids		433.3				
5.	Suspended Solids		NR				
6.	Dissolved Oxygen		NR				
7.	Dissolved CO2		NR				
8.	Oil In Water		NR				
9.							
10.	Methyl Orange Alkalinity (CaC						
11.	Bicarbonate	HCO3	170.0	HCO3	2.8		
12.	Chloride	cl	127.0	Cl	3.6		
13.	E. C.	SO4	25.0	S04	0.5		
	Calcium	Ca	128.0	Ca	6.4		
15.	Magnesium	Mg	31.7	Mg	2.6		
16.	Sodium (calculated)	Νa	-48.3	Na	-2.1		
17.	Iron	Fe	0.0				
18.	Barium	Ba	0.0				
	Strontium	Sr	0.0				
20.	Total Hardness (CaCO3)		450.0				

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound Equiv wt X meq/L = mg	/L
6 *Ca < *HCO3 3 3 *Mg> *SO4 1	Ca(HCO3)2 81.0 2.8 22 CaSO4 68.1 0.5 3 CaCl2 55.5 3.1 17 Mg(HCO3)2 73.2 MgSO4 60.2	5
ii i i i i i i i i i i i i i i i i	MgCl2 47.6 0.5 2 NaHCO3 84.0 Na2SO4 71.0 NaCl 58.4	4

REMARKS:

---- L. MALLETT / FILE

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WATER ANALYSIS REPORT

Company : YATES DRILLING Date : 11/09/92
Address : ARTESIA, NEW MEXICO Date Sampled : 11/06/92
Lease : DAVE FEDERAL Analysis No. : 218
Well : BATTERY
Sample Pt. : GUN BARREL

	ANALYSIS		mg/L		* meq/L
1.	pH 7.0				
2.	H2S 1 PPM				
3.	Specific Gravity 1.025				
4.	Total Dissolved Solids		34942.6		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (C				
10.	Methyl Orange Alkalinity (CaC	03)			
11.	Bicarbonate	HCO3	146.0	HCO3	2.4
	Chloride	Cl	21303.0	Cl	600.9
13.	Sulfate	SO4	1750.0	SO4	36.4
14.	Calcium	Ca	2480.0	Ca	123.8
15.	Magnesium	Mg	2916.2	Mg	239.9
16.	Sodium (calculated)	Na	6347.4	Na	276.1
17.	Iron	Fe	0.0		
18.	Barium	Ba	0.0		
19.	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		18200.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter	Compound	Equiv wt	X meq/L	= mg/L
124 *Ca < *HCO3 2 /> 240 *Mg> *SO4 36 276 *Na *Cl 601	Ca(HCO3)2 CaSO4 CaCl2 Mg(HCO3)2 MgSO4 MgCl2	81.0 68.1 55.5 73.2 60.2 47.6	2.4 36.4 84.9	194 2480 4712
Saturation Values Dist. Water 20 C CaCO3 13 mg/L CaSO4 * 2H2O 2090 mg/L BaSO4 2.4 mg/L	NaHCO3 Na2SO4 NaCl	84.0 71.0 58.4	276.1	16135

REMARKS:

---- L. MALLETT / FILE

Petrolite Oilfield Chemicals Group



SCALE TENDENCY REPORT

Company : YATES DRILLING
Address : ARTESIA, NEW MEXICO
Lease : DAVE FEDERAL
Well : BATTERY
Sample Pt. : GUN BARREL Date : 11/09/92
Date Sampled : 11/06/92
Analysis No. : 218
Analyst : STEVE TIGERT

STABILITY INDEX CALCULATIONS (Stiff-Davis Method) CaCO3 Scaling Tendency

0.3 at 80 deg. F or 27 deg. C 0.4 at 100 deg. F or 38 deg. C 0.5 at 120 deg. F or 49 deg. C 0.5 at 140 deg. F or 60 deg. C 0.6 at 160 deg. F or 71 deg. C s.i. =S.I. = S.I. = S.I. =S.I. =

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS (Skillman-McDonald-Stiff Method) Calcium Sulfate

S = 3262 at 80 deg. F or 27 deg C S = 3375 at 100 deg. F or 38 deg C S = 3407 at 120 deg. F or 49 deg C S = 3419 at 140 deg. F or 60 deg C S = 3352 at 160 deg. F or 71 deg C

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WATER ANALYSIS REPORT

Company : YATES DRILLING Date : 11/09/92 Date Sampled: 11/06/92 Analysis No.: 219 Address : ARTESIA, NEW MEXICO : DELUNA FEDERAL Lease

Well : BATTERY Sample Pt. : GUN BARREL

ANALYSIS mg/L * meq/L _____ _____ Нq 7.1 2. H2S 1 PPM Specific Gravity 3. 1.040 4. Total Dissolved Solids 62813.1 Suspended Solids 5. NR Dissolved Oxygen 6. NR 7. Dissolved CO2 NR 8. Oil In Water NR 9. Phenolphthalein Alkalinity (CaCO3) Methyl Orange Alkalinity (CaCO3) 10. 11. Bicarbonate HCO3 244.0 HCO3 4.0 Chloride 12. Cl 37275.0 Cl 1051.5 Sulfate 13. SO4 1875.0 SO4 39.0 Calcium 14. Ca 1400.0 Ca 69.9 15. Magnesium 1725.4 Mg 141.9 Mq 16. Sodium (calculated) Na 20293.7 Na 882.7 17. Iron Fe 0.0 18. Barium Ba 0.0 19. Strontium sr0.0 20. Total Hardness (CaCO3)

PROBABLE MINERAL COMPOSITION ______

10600.0

*milli equivalents per Liter	+	Compound	Equiv wt	X meq/L	= mg/L
70 *Ca < *HCO3 /> 142 *Mg> *SO4 </td <td>39</td> <td>Ca(HCO3)2 CaSO4 CaCl2 Mg(HCO3)2</td> <td>81.0 68.1 55.5 73.2</td> <td>4.0 39.0 26.8</td> <td>324 2657 1488</td>	39	Ca(HCO3)2 CaSO4 CaCl2 Mg(HCO3)2	81.0 68.1 55.5 73.2	4.0 39.0 26.8	324 2657 1488
883 *Na> *Cl' ++ Saturation Values Dist. Water		MgSO4 MgCl2 NaHCO3	60.2 47.6 84.0	141.9	6757
CaCO3 13 mg/ CaSO4 * 2H2O 2090 mg/ BaSO4 2.4 mg/	/L	Na2SO4 NaCl	71.0 58.4	882.7	51586

REMARKS:

L. MALLETT / FILE

Petrolite Oilfield Chemicals Group



SCALE TENDENCY REPORT

Company : YATES DRILLING
Address : ARTESIA, NEW MEXICO
Lease : DELUNA FEDERAL
Well : BATTERY
Sample Pt. : GUN BARREL Date : 11/09/92 Date Sampled: 11/06/92
Analysis No.: 219
Analyst: STEVE TIGERT

STABILITY INDEX CALCULATIONS (Stiff-Davis Method) CaCO3 Scaling Tendency

0.3 at 80 deg. F or 27 deg. C 0.4 at 100 deg. F or 38 deg. C 0.5 at 120 deg. F or 49 deg. C 0.6 at 140 deg. F or 60 deg. C 0.7 at 160 deg. F or 71 deg. C s.I. = S.I. = S.I. = S.I. = S.I. =

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS (Skillman-McDonald-Stiff Method) Calcium Sulfate

S = 5336 at 80 deg. F or 27 deg C S = 5501 at 100 deg. F or 38 deg C S = 5556 at 120 deg. F or 49 deg C S = 5585 at 140 deg. F or 60 deg C S = 5517 at 160 deg. F or 71 deg C

Petrolite Oilfield Chemicals Group

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WATER ANALYSIS REPORT

Company : YATES DRILLING
Address : ARTESIA, NEW MEXICO
Lease : BURKETT FEDERAL
Well : BATTERY
Sample Pt. : GUN BARREL Date : 11/09/92 Date Sampled : 11/06/92 Analysis No. : 220

	ANALYSIS		mg/L		* meq/L
1. 2.	pH 7.0 H2S 1 PPM				
3.	Specific Gravity 1.030				
4.	Total Dissolved Solids		46894.5		
5.	Suspended Solids		NR		
6.	Dissolved Oxygen		NR		
7.	Dissolved CO2		NR		
8.	Oil In Water		NR		
9.	Phenolphthalein Alkalinity (C				
10.	Methyl Orange Alkalinity (CaC	(03)			
11.	Bicarbonate	HCO3	146.0	HCO3	2.4
	Chloride	Cl	28116.0	Cl	793.1
13.	Sulfate	SO4	1750.0	S04	36.4
14.	Calcium	Ca	2000.0	Ca	99.8
15.	Magnesium	Mg	2187.3	Mg	179.9
16.	Sodium (calculated)	Na	12695.2	Na	552.2
17.	Iron	Fe	0.0		
18.	Barium	Ba	0.0		
	Strontium	Sr	0.0		
20.	Total Hardness (CaCO3)		14000.0		

PROBABLE MINERAL COMPOSITION

*milli equivalents per Liter					
+	}	++			
100	*Ca < *HCO3	2			
	/>				
180	*Mg> *SO4	36			
	</td <td> </td>				
552	*Na> *Cl'	793			
+	+	+			

÷÷			+	
Saturation	Values	Dist. Wa	ater 20	(
CaCO3		13	mg/L	
CaSO4 *	2H2O	2090	mg/L	

Cacos			13	m9/1
CaSO4	*	2H2O	2090	mg/L
BaSO4			2.4	mg/L

			51 —
Ca (HCO3) 2	81.0	2.4	194
CaSO4	68.1	36.4	2480
CaCl2	55.5	61.0	3383
Mg (HCO3) 2	73.2		
MgS04	60.2		
MgCl2	47.6	179.9	8566
NaHCO3	84.0		
Na2SO4	71.0		
NaCl	58.4	552.2	32271

Compound Equiv wt X meg/L = mg/L

REMARKS:

----- L. MALLETT / FILE

Petrolite Oilfield Chemicals Group



SCALE TENDENCY REPORT

Company : YATES DRILLING
Address : ARTESIA, NEW MEXICO
Lease : BURKETT FEDERAL
Well : BATTERY
Sample Pt. : GUN BARREL Date : 11/09/92 Date Sampled : 11/06/92 Analysis No. : 220 Analyst : STEVE TIGERT Date

STABILITY INDEX CALCULATIONS (Stiff-Davis Method) CaCO3 Scaling Tendency

S.I. = 0.2 at 80 deg. F or 27 deg. C S.I. = 0.3 at 100 deg. F or 38 deg. C S.I. = 0.3 at 120 deg. F or 49 deg. C S.I. = 0.4 at 140 deg. F or 60 deg. C S.I. = 0.5 at 160 deg. F or 71 deg. C

CALCIUM SULFATE SCALING TENDENCY CALCULATIONS (Skillman-McDonald-Stiff Method) Calcium Sulfate

S = 4073 at 80 deg. F or 27 deg C S = 4208 at 100 deg. F or 38 deg C S = 4248 at 120 deg. F or 49 deg C S = 4265 at 140 deg. F or 60 deg C S = 4195 at 160 deg. F or 71 deg C

Petrolite Oilfield Chemicals Group

<u>Cactus Queen</u> Leasehold Ownership

1. SWNW of Section 35, T12 S-R31E, B-10420

C.R. Gallagher, Jr. P.O. Box 628 Pass Christian, MS 39571

Delfern Operating Account 1005 Texas Commerce Bank Bldg. 1208 14th Street Lubbock, Texas 79401

- 2. NWSW of Section 35, T12S-R31E, B-9359 Great Western Drilling Company P.O. Box 1659 Midland, Texas 79702
- 3. SWSW of Section 35, T12S-R31E Unleased State Lands
- 4. SESE of Section 28, T12S-R31E

 Burk Royalty Company
 P.O. Box BRC

 Wichita Falls, Texas 76307

Dalport Petroleum Corporation 1401 Elm Street Dallas, Texas 75202

F. Frank Stringer
Dr. James Womack
Edwin S. Mayer, Jr.
J.A. March III
Guy A. Swartz
P.O. Box 3037
San Angelo, Texas 76901

Eurampex 12001 NW Expressway, Suite 1150 Dallas, Texas 75243

Ramco- NYL 1987 LTD Partnership 100 NW 63rd St., Suite 300 Oklahoma City, Oklahoma 73116

R.B. Operating Company 3100 Mid-Continent Tower Tulsa, OK 74103

Pacific Enterprises Oil Company 5 Greenway Plaza, Suite 300 Houston, Texas 77046

TXO Production Corporation Fidelty Union Tower Dallas, Texas 75201

5. N/2NE/4 of Section 3, T13S-R31E Circle Ridge Production, Inc. 300 East North Side Drive Fort Worth, Texas 76106

<u>Cactus Queen</u> Surface Ownership

1. SW/4, S/2NW/4, SW/4NE/4 of Section 34, T12S-R31E:

W.T. Tivis, Jr. and wife Wilberta P.O. Box 1614 Eunice, New Mexico 88231

2. NW/4SE/4 of Section 34, T12S-R31E:

U.S.A. (surface)