	BUREAU OF	ASC 3-18-94
(June 1990) DEPARTME	ITED STATES INT OF THE INTERIOR LAND MANAGEMENT O	N.M. OIL CONS. COMMISSION N.M. OIL CONS. COMMISSION P.O. BOX 1980 HOBES, Bitch No. 1004-0135 Expires: March 31, 1993 5. Lease Designation and Serial No.
Do not use this form for proposals to o	drill or to deepen or reentry to a different reservoir OR PERMIT—" for such propagals	LC063867 6. If Indian, Allottee or Tribe Name
SUBMI	T IN TRIPLICATE	7. If Unit or CA, Agreement Designation
1. Type of Well	525	
2. Name of Operator	·····	8. Well Name and No. Fed
Quality Production Corp		Harrison <sup>1</sup> #4
3. Address and Telephone No.		30-025-21934
207 W. McKay, Carlsbad,		10. Field and Pool, or Exploratory Area
4. Location of Well (Footage, Sec., T., R., M., or Survey		Malj. GB SA
990' FNL & 990' FWL, Un	it D, Sec 3, 17S, 32E	11. County or Parish, State Lea, NM
	14	lica, Mr
12. CHECK APPROPRIATE BOX	(s) TO INDICATE NATURE OF NOTICE, REPO	RT, OR OTHER DATA
TYPE OF SUBMISSION	TYPE OF ACTION	
Notice of Intent		Change of Plans
		New Construction
Subsequent Report	Plugging Back	Non-Routine Fracturing
Final Abandonment Notice		Water Shut-Off
	Chter	Conversion to Injection
		(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)
13. Describe Proposed or Completed Operations (Clearly state give subsurface locations and measured and true ver	all pertinent details, and give pertinent dates, including estimated date of starting tical depths for all markers and zones pertinent to this work.)*	g any proposed work. If well is directionally drilled,
	of produced water and submit the following:	
Water producing formations	Grayburg & San Andres	
Daily water production: 2 Bl	bls/Day	
Current water analysis attac	hed.	77
Produced water is stored in t Water Disposal, SW/4 Secti No. R-6811-B is attached.	two 250 bbl. water tanks and is hauled by truck to the on 16 T17S R30E, Eddy County, New Mexico. A co	e Loco Hills 🗧
14. I hereby certify the the foregoing is true and correct	Agent	03/17/94
Signed Si		Date
Approved by Conditions of approval, if any:	PETROLEUM ENGINEER	
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Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.



PETROLEUM ENE

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## Unichem International

707 North Leech P.O.Box 1499

# Hobbs, New Mexico 88240

Quality Production Corp. Company : : 3-8-1994 Date Location: Harrison Fed (on 2-28-1994)

	Sample 1
Specific Gravity:	1.099
Total Dissolved Solids:	139107
pH:	6.10
IONIC STRENGTH:	2.701

CATIONS:		me/liter	mg/liter
Calcium	(Ca+2)	280	5600
Magnesium	(Mg+2)	220	2670
Sodium	(Na+1)	1920	44200
Dissolved Iron	(Fe+2)	0.036	1.00
ANIONS:			
Bicarbonate	(HCO3-1)	2.80	171
Carbonate	(CO3-2)	0	0
Hydroxide	(OH-1)	0	1 <b>O</b>
Sulfate	(SO4-2)	51.0	2450
Chloride	(Cl-1)	2370	84000

# 

	SCALING INDE	(positive	value indicate Calcium	s scale) Calcium
Temper	rature		Carbonate	Sulfate
86[F	30[C		-0.37	7.0
110[F	43[C		0.36	7.3
130[F	54[C		0.70	7.3
140[F	60[C		0.89	7.3
160[F	71[C		1.3	6.2

Comments: Analysis performed by Bob Wallace - Hobbs Lab cc: Bill Polk Joe Hay

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### STATE OF NEW ME CO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION COMMISSION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION COMMISSION FOR THE PURPOSE OF CONSIDERING:

> CASE NO. 7720 Order No. R-6811-B

APPLICATION OF LOCO HILLS WATER DISPOSAL COMPANY FOR AN AMENDMENT TO DIVISION ORDER NO. R-6811-A, EDDY COUNTY, NEW MEXICO.

## ORDER OF THE COMMISSION

#### BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 29, 1982, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission".

NOW, on this <u>30th</u> day of December, 1982, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Loco Hills Water Disposal Company, seeks an order amending Division Order No. R-6811-A to remove the present maximum disposal limit of 2,500 barrels per acre per month imposed upon the salt water disposal facility authorized, therein, in Section 16, Township 17 South, Range 30 East, NMPM, Eddy County, New Mexico.

(3) That said Order No. R-6811-A was issued by the Commission following the hearing of Case No. 7329 <u>De Novo</u> on July 14, 1982.

(4) That in said Order No. R-6811-A, the Commission made, among others, the following findings:

"(6) That Order (3) of Division Order No. R-3221, as amended, prohibits in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, the disposal, subject to minor exceptions, of water produced

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-2-Case No. 772. Order No. R-6811-B

> in conjunction with the production of oil or gas, or both, on the surface of the ground, or in any pit, pond, lake, depression, draw, streambed, or arroyo, or in any watercourse, or in any other place or in any manner which would constitute a hazard to any fresh water supplies and said disposal has not previously been prohibited.

> (7) That the aforesaid Order No. R-3221 was issued in order to afford reasonable protection against contamination of fresh water supplies designated by the State Engineer through disposal of water produced in conjunction with the production of oil or gas, or both, in unlined surface pits.

(8) That the State Engineer has designated, pursuant to Section 65-3-11 (15), N.M.S.A., 1953 Compilation, all underground water in the State of New Mexico containing 10,000 parts per million or less of dissolved solids as fresh water supplies to be afforded reasonable protection against contamination; except that said designation does not include any water for which there is no present or reasonably foreseeable beneficial use that would be impaired by contamination.

(9) That the applicant seeks an exception to the provisions of the aforesaid Order (3) of Division Order No. R-3221, as amended, to permit the commercial disposal of produced salt water into the aforesaid pits at the site described above.

(10) That the applicant proposes to install and operate an effective system, composed of holding and separating tanks, and a skimming pit, for the removal of oily and solid wastes from the waters to be disposed of into said system.

(11) That there is no fresh water in the immediate vicinity of said disposal system, but there are wells producing fresh water some nine miles south of the proposed disposal pits.

(12) That the native soils underlying said pits will permit the vertical percolation of some of the waters disposed of in said system.

(13) That the vertical percolation of waters from said system should not endanger any fresh waters.

(14) That to ensure that waters percolating from said pits move only vertically, monitor wells should be

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-3-Case No. 7720 Order No. R-6811-B

drilled in a pattern as shown on Exhibit "A" designed to detect horizontal movement of water from said disposal area.

(15) That in the event salt water is detected in any monitor well, Case No. 7329 should be reopened within 90 days to permit applicant to appear and show cause why the authority to use said pits for water disposal should not be rescinded.

(16) That the maximum volume of produced water to be disposed of through said system should not exceed 2500 barrels per acre per month.

(17) That a freeboard of a minimum of three feet should be maintained at all times."

(5) That said Order No. R-6811-A did contain provisions limiting the maximum disposal volume to 2500 barrels per acre per month, requiring maintenance of a minimum three foot freeboard in all pits and the drilling and equiping of monitor wells.

(6) That the applicant now seeks the amendment of said Order No. R-6811-A to remove only the 2500 barrels per acre per month disposal volume limitation.

(7) That the application was opposed by a surface and ground water interest owner in the area which might be affected by the disposal operation.

(8) That the applicant presented evidence designed to demonstrate that the change in disposal volume would not significantly alter the hydrologic regime established by institution of the disposal operation nor threaten contamination of any fresh water supplies.

(9) That the protestant presented new evidence which tended to show that there were both southeast and southwest trending slopes on the interface between the Santa Rosa formation and the Rustler formation under the disposal pits.

(10) That the protestant further presented testimony tending to show that an impermeable clay barrier exists at the base of the Santa Rosa formation which would effectively stop the vertical infiltration of the disposed waters into the Rustler formation.



-4-Case No. 772. Order No. R-6811-B

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(11) That if the disposed water which percolates through the Santa Rosa formation from said pits cannot move into the Rustler formation, it may move laterally through the Santa Rosa formation where it may endanger fresh water supplies.

(12) That in order to verify that any water percolating from said pits ultimately enters the Rustler formation and does not move laterally within the Santa Rosa formation, the well monitoring system provided for in said Order No. R-6811-A should be expanded.

(13) That the additional monitor wells should be drilled to the Rustler formation and should be located at points approximately 250 feet north of the present monitor well No. 9 located to the east of the disposal facility, approximately 150 feet from monitor well No. 2 along a line connecting monitor well 2 and monitor well 3, and at a third location approximately midway between the present monitor holes No. 4 and 5 all as depicted on Exhibit "A" to said Order No. R-6811-A.

(14) That provided that these additional monitor wells are drilled and utilized in the same manner as the original monitor wells, no increased threat to fresh water supplies should result from lifting the 2500 barrels-per-acre disposal limitation contained in Order No. R-6811-A.

(15) That the application should be approved and the additional monitor wells should be required.

(16) That the granting of this application restricted in the manner set forth above will not cause waste, or impair correlative rights, or endanger designated fresh water supplies.

### IT IS THEREFORE ORDERED:

(1) That the application of Loco Hills Water Disposal Company for an amendment of Division Order No. R-6811-A to remove the 2500 barrel per acre per month disposal limitation included in Order No. (1), thereof, is hereby approved.

PROVIDED HOWEVER, that this order shall not become effective until the applicant has drilled and completed three additional monitor wells located approximately (1) 250 feet to the North of present monitor hole No. 9, (2) 150 feet from present monitor well No. 2 along a line connecting monitor well No. 2 and 3 and (3) midway between the present monitor holes Nos. 4 and 5.

PROVIDED FURTHER, that each of said monitor wells shall be drilled to the top of the Rustler formation and that such wells

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-5-Case No. 7720 Order No. R-6811-B

shall be cased and operated in the same manner as those monitor wells required by Order No. R-6811-A.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

OIL CONSERVATION COMMISSION

ALEX J. ARMIJO, Member

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ED KELLEY, Member

JOE D. RAMEY, Member & Secretary



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