Form 3160-5 (April 2004)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

FORM APPROVED OMB NO. 1004-0137 Expires March 31, 2007

5. Lease Serial No.

SUNDRY NOTICES AND REPORTS ON WELLS

NM NM 98791

Do not use this form for particles. Use Form	6. If I	6. If Indian, Allottee or Tribe Name		
SUBMIT IN TRIPLICATE -	Other instructions	on reverse side	7. If U	Unit or CA/Agreement, Name and/or No
1. Type of Well Oil Well X Gas Well Other 2. Name of Operator PARALLEL PETROLEUM CORPORATION 3a. Address 1004 N BIG SPRING, MIDIAND, TX 7970 4. Location of Well (Footage, Sec., T., R., M., or Survey) SL: 560 FSL & 1880 FEL BHL: 660 FNL & 1880 FEL SEC 1, 12. CHECK APPROPRIATE	Description) T19S, R21E	JUN 2 4 200 OCD-ARTES 3b. Phone No. (include and 432-685-6563) DICATE NATURE OF 1	9. AP ea code) 10. F 4 MI S/ 11. C	
TYPE OF SUBMISSION		TYI	PE OF ACTION	
a	plete horizontally, give s rformed or provide the If the operation results in Notices shall be filed or ction.)	alls, including estimated startisubsurface locations and mea Bond No. on file with BLM in a multiple completion or many after all requirements, incompletions.	sured and true vertical de /BIA. Required subseque ecompletion in a new inte cluding reclamation, have	Well Integrity X Other ADDITIONAL INFORMATION FOR SAD FACTLITIES work and approximate duration thereof, pths of all pertinent markers and zones, ent reports shall be filed within 30 days erval, a Form 3160-4 shall be filed once been completed, and the operator has THRU 5 ADDRESSED
14. I hereby certify that the foregoing is true and correct Name (Printed Typed)		Title		
KAYE MC CORMICK	,	_	D & REG TECH	
Tage M Claimick	S SPACE FOR FEE	DERAL OR STATE OF		
Approved by	O OI AOL I ON FEL	Title	TIVE USE	Date
Conditions of approval, if any, are attached. Approval of certify that the applicant holds legal or equitable title to which would entitle the applicant to conduct operations t	those rights in the sub	warrant or Office oject lease		

SUBJECT WELL: MATCH BOX FEDERAL #1, API 30-015-34640

Information needed for the authorization for the disposal of produced water off lease:

1. Injection Facility's Underground Injection Control Permit including OCD Permit Number

MESQUITE SWD INC, P.O. BOX 1479, CARLSBAD, NM 88221-1479; ORDER #SWD 180 ROEMANN SWD INC, P.O. BOX 2728, PEARLAND, TX 77582-2728; ORDER #R-8079, CASE #8738

2. Produced Water Volume: 2 BWPD

Formation: WOLFCAMP

3. Water Analysis of produced water: ATTACHED, DATED 05-02-2008

4. Legal land description of disposal facility:

MESQUITE: EXXON STATE #18, SEC 15, T21S, R27E, EDDY CO, NM ROEMANN: FANNING COM #1, SEC 4, T19S, R26E, EDDY CO, NM

- 5. Alternate disposal facility
 - a. Underground Injection Control Permit including OCD Permit Number CONTROLLED RECOVERY INC., P.O. BOX 388, HOBBS, NM 88241-0388; ORDER # R-9166, CASE #9882
 - b. Legal land description of facility
 S/2 N/2 & N/2 S/2 SEC 27, TS 20S, R 32E, LEA CO, NM

-> KAIJE Mc CORMICK 432-685-6586 megaite som Inc.

Eddy.

WU 102 0100

SUBJECT: SALT WATER DISPOSAL WELL

ORDER NO. SWD-180

THE APPLICATION OF A. H. RAINS FOR A SALT WATER DISPOSAL WELL.

ADMINISTRATIVE ORDER OF THE OIL CONSERVATION COMMISSION

Under the provisions of Rule 701 (C), A. H. Rains made application to the New Mexico Oil Conservation Commission on December 13, 1976, for permission to complete for salt water disposal his Exxon State Well No. 8 located in Unit O of Section 15, Township 21 South, Range 27 East, NMPM, Lea County, New Mexic

The Secretary-Director finds:

- 1. That application has been duly filed under the provisions of Rule 701 (C) of the Commission Rules and Regulation
- 2. That satisfactory information has been provided that all offset operators and surface owners have been duly notified;
- 3. That the applicant has presented satisfactory evidence that all requirements in Rule 701 (C) will be met.
- 4. That no oubjections have been received within the waiting period prescribed by said rule.

IT IS FURTHER ORDERED:

That the applicant herein, A. H. Rains, is hereby authorized to complete its Exxon State Well No. 8 located in Unit O of Section 15, Township 21 South, Range 27 East, NMPM, Eddy County, New Mexico, in such a manner as to permit the injection of salt water for disposal purposes into the Yates formation at approximately 570 feet to approximately 600 feet through 2 3/8 inch plastic lined tubing set in a packer located at approximatel 565 feet.

IT IS FURTHER ORDERED:

That the operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

That the casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing, or packer.

That the operator shall notify the supervisor of the Commission's Artesia District Office before injection is commence through said well.

-2-

Salt Water Disposal - A. H. Pains

PROVIDED FURTHER

That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order after notice and hearing the Commission may terminate the authority hereby granted in the interest of conservation. That applicant shall submit monthly reports of the disposal operation in accordance with Rule 704 and 1120 of the Commission Rules and Regulations.

APPROVED at Santa Fe, New Mexico, on this 31st day of December.

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

JOE D. MAMEY Secretary-Director

SEAL

Jun 13 08 04:07p Donnie Hill

KayE me Cormice

14--4-19

STATE OF NEW MEXI ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

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

ROEMANNSWA

APPLICATION OF CHAMA PETROLEUM COMPANY FOR SALT WATER DISPOSAL, EDDY COUNTY, NEW MEXICO CASE NO. 8738 Crder No. R-8079

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8 a.m. on October 23, 1985, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 18th day of November, 1985, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises.

PINDS THATE

- (1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) The applicant, Chama Petroleum Company, seeks authority to re-enter the Samedan Oil Corporation Fanning Com Well No. 1 located 1980 feet from the South and West lines (Unit K) of Section 4, Township 19 South, Range 26 East, NMPM, Eddy County, New Mexico and to utilize said well1 as a produced salt water disposal well, with injection into the perforated interval from approximately 8023 feet to 8136 feet in the Cisco and Canyon formations.
- (3) The subject well was spudded on September 16, 1973, completed in the West Four Mile Draw-Morrow Gas Pool, and was plugged and abandoned by Samedan Oil Corporation in December, 1978.
- (4) Originally said well had 9461 feet of 4 1/2-inch casing set for its production string. At the time it was plugged and abandoned 7995 feet of this casing string was recovered.

-2-Case No. 8738 Order No. R-8079

- (5) The applicant proposes to recomplete the subject well by tying back into the 4 1/2-inch casing with an overshot on a 5 1/2-inch casing which casing string should be adequately cemented to specifications set by the Supervisor of the Artesia District Office; the injection should be accomplished through 2 7/8-inch plastic lined tubing installed in a packer set at approximately 7923 feet; the casing-tubing annulus should be filled with an inert fluid; and a pressure gauge or approved leak detection device should be attached to the annulus in order to determine leakage in the casing, tubing, or packer.
- (6) Prior to commencing injection operations, the casing in the subject well should be pressure-tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.
- (7) The injection well or system should be equipped with a pressure limiting switch or other acceptable device which will limit the wellhead pressure on the injection well to no more than 1600 psi.
- (8) The Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the Cisco formation.
- (9) The operator should give advance notification to the supervisor of the Artesia district office of the Division of the date and time of the installation of disposal equipment and of the mechanical integrity pressure test in order that the same may be witnessed.
- (10) The operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.
- (11) Approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Chama Petroleum Company, is hereby authorized to re-enter and utilize the Samedan Oil Corporation Fanning Com Well No. 1, located 1980 feet from the South and West lines (Unit K) of Section 4, Township 19 South, Range 26 East, NMPM, Eddy County, New Mexico, to dispose of produced east water into the Cisco and Canyon formations, injection to

Case No. 8736 Order No. R-8079

(7) 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.

STATE OF NEW MEXICO OIL CONSERVATION DIVISION

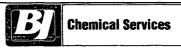
R. L. STAMETS,

Director

WU 102 U 100

SEAL

Analytical Laboratory Report for:



PARALLEL PETROLEUM NM LEASES **ONLY**

Account Representative: Nailon, David

Production Water Analysis

Listed below please find water analysis report from: MATCHBOX, 1

Lab Test No:

2008118475

Sample Date:

05/02/2008

Specific Gravity: 1.070

TDS:

105831

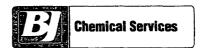
pH:

6.60

Cations:	mg/L	as:
Calcium	9513	(Ca ^{⁺⁺})
Magnesium	2980	(Mg ⁺⁺)
Sodium	25505	(Na [*])
Iron	64.82	(Fe ⁺⁺)
Potassium	407.1	(K [*])
Barium	1.19	(Ba ^{⁺⁺})
Strontium	164.61	(Sr ⁺⁺)
Manganese	3.26	(Mn [→])
Aņioņs;	mg/L	as:
Bicarbonate	305	(HCO ₃)
Sulfate	87	(SO ₄ ⁼)
Chloride	66800	(CI)
Gases:		(,
Carbon Dioxide	200	(CO ₂)
Hydrogen Sulfide	0	(H,S)

PARALLEL PETROLEUM NM Lab Test No: 2008118475 LEASES ONLY

DownHole SAT[™] Scale Prediction @ 100 deg. F



Mineral Scale	Saturation Index	Momentary Excess (lbs/1000 bbls)
Calcite (CaCO3)	3.28	.0265
Aragonite (CaCO3)	2.78	.0244
Witherite (BaCO3)	< 0.001	-26.07
Strontianite (SrCO3)	.0574	916
Magnesite (MgCO3)	1.33	.00796
Anhydrite (CaSO4)	.043	-217.88
Gypsum (CaSO4*2H2O)	.0546	-192.62
Barite (BaSO4)	.094	-5.08
Celestite (SrSO4)	.0126	-294.94
Silica (SiO2)	0	-48.81
Brucite (Mg(OH)2)	< 0.001	213
Magnesium silicate	0	-116.81
Siderite (FeCO3)	24.19	.0424
Halite (NaCl)	.0238	-157862
Thenardite (Na2SO4)	< 0.001	-82305
Iron sulfide (FeS)	0	0547

Interpretation of DHSat Results:

The Saturation Index is calculated for each mineral species independently and is a measure of the degree of supersaturation (driving force for precipitation) under the conditions modeled. This value ranges from 0 to infinity with 1.0 representing a condition of equilibrium where scale will neither dissolve nor precipitate. Values less than 1.0 are undersaturated and values greater than 1.0 are supersaturated. The scale is logarithmic, i.e. a Saturation Index of 3 is 10 times more saturated than a value of 2.

The Momentary excess is a measure of how much scale would have to precipitate to bring the system back to a non-scaling condition. This value ranges from negative (dissolving) infinity to positive (precipitating) infinity. The Momentary Excess represents the amount of scale possible while the Saturation Level represents the probability that scale will form.

·

PERMIT FOR OIL TREATING PLANT AND SURFACE WASTE DISPOSAL

STATE OF NEW MEXICO ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

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

CASE NO. 9882 Order No. R-9166

APPLICATION OF CONTROLLED RECOVERY INC. FOR AN OIL TREATING PLANT PERMIT, SURFACE WASTE DISPOSAL AND AN EXCEPTION TO ORDER NO. R-3221, LEA COUNTY, NEW MEXICO

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for bearing at 8:15 a.m. on April 4, 1990, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this <u>27th</u> day of April, 1990, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS THAT:

- (1) Due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.
- (2) Decretary Paragraph No. (3) of Division Order No. R-3221, as amended, prohibits in that area encompassed by Lea, Eddy, Chaves, and Roosevelt Counties, New Mercico, the disposal, subject to minor exceptions, of water produced 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 water course, or in any other place or in any manner which would constitute a hazard to any fresh water supplies.
- (3) 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.
- (4) The State Engineer has designated 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.
- (5) The applicant, Controlled Recovery Inc., seeks authority to construct and operate a surface waste disposal facility and an oil treating plant for the purpose of treating and reclaiming sediment oil and for the collection, disposal, evaporation, or storage of produced water, drilling fluids, drill cuttings, completion fluids and other non-hazardous oilfield related waste in unlined surface pits at a sate in the S/2 N/2 and the N/2 S/2 of Section 27, Township 20 South, Range 32 East, NMPM, Lea County, New Mexico.

CONTROLLED RECOURRY

- (6) The applicant proposes to install and operate an effective system, consisting of separating tanks, a water disposal pit, a solids disposal pit, and associated skimming, heat, and/or chemical separating equipment for the removal and reclamation of oil and basic sediments from the produced water to be disposed of, and a settling area to separate other solid waste.
- (7) The proposed plant and method of processing will efficiently process, treat, and reclaim the aforementioned waste oil, thereby salvaging oil which would otherwise be unrecoverable.
- (8) No interested party appeared at the hearing in opposition to the application.
- (9) A naturally occurring salt lake (Laguna Toston) is located in the S/2 of Section 21 and the N/2 of Section 28, Township 20 South, Range 32 East, NMPM, Lea County, New Mexico, and is approximately three-quarters of a mile from the proposed disposal area.
- (10) The hydrogeologic evidence presented in this case establishes that:
- a) Triassic redbeds, comprised of the Chinle Shale, Santa Rosa sandstone, and the Dewey Lake formation, underlies both Laguna Toston and the proposed water disposal site;
- b) Shales within the Triassic redbeds underlying the proposed waste disposal site and Laguna Toston are virtually impermeable and therefore prevent vertical scepage of the waters from the site and Laguna Toston into sand stringers with the redbeds which may contain fresh water,
- c) The surface of the Triassic redbeds is depressed in the vicinity of the waste disposal site and Laguna Toston thus creating a "collapse feature".
- d) The major flow of surface and subsurface water within the boundaries of the "collapse feature" is toward Laguas Toston;
- e) Seepage from the Impoundments at the proposed waste disposal site will infiltrate into the subsurface and migrate toward Laguna Toston;
- 1) After the seepage reaches Laguna Toston, practically all of the seepage will evaporate;
- g) There is no present or reasonably foreseeable beneficial use of the waters of Laguna Toston;
- b) There are no known sources of potable groundwater in sediments underlying the Triassic redbeds at Laguna Toston;
- i) The utilization of the proposed disposal site adjacent to Laguna Toston for the disposal of water produced in conjunction with the production of oil or gas, or both, and other non-hazardous oilfield waste products, including drill cuttings and drilling muds should not constitute a hazard to any fresh water supplies.
- (11) The applicant should be authorized to utilize the unlined pits described in Finding Paragraph Nos. (5) and (6) above, for the disposal of water produced in conjunction with the production of oil or gas, or both, and other non-hazardous oilfield waste products, including drill cuttings and drilling muds.
- (12) The maximum fill level in both of the above-described pits should be limited to a plane below the crest of the dikes surrounding the pits in order to proclude over-tapping of the dikes.
- (13) The proposed oil treating plant and disposal facility should be constructed in accordance with the engineering plat and topographic map presented as evidence in this case and in accordance with such additional conditions and requirements as may be directed by the Division Director, and should be operated and maintained in such a manner as to preclude spills and fires, and protect persons and livestock.
- (14) Prior to initiating operations, the facility should be inspected by a representative of the Hobbs district office of the Division in order to determine the adequacy of feaces, gates and cattleguards necessary to preclude livestock and unauthorized persons from entering and/or utilizing said facility, and also to determine the adequacy of dikes and berms needed to assure safe plant operation.
- (15) The Director of the Division should be authorized to administratively grant approval for the expansion or modification of the proposed treating plant.

- (16) Authority for operation of the treating plant and disposal facility should be suspended or rescinded whenever such suspension or rescission should appear necessary to protect human health or property, to protect fresh water supplies from contamination, to prevent waste, or for non-compliance with the terms and conditions of this order or Division Rules and Regulations.
- (17) Prior to constructing said facility, the applicant should be required to submit to the Santa Fe office of the Division a sufety or cash bond in the amount of \$25,000 in a form approved by the Division.
- (18) Authority for operation of the treating plant and disposal facility should be transferrable only upon written application and approval by the Division Director.
- (19) The granting of this application should not endanger designated fresh water supplies, and will prevent waste by allowing the recovery of otherwise unrecoverable oil.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Controlled Recovery Inc., is hereby authorized to construct and operate a surface waste disposal facility complete with unlined surface pits and an oil treating plant at a site in the S/2 N/2 and the N/2 S/2 of Section 27, Township 20 South, Range 32 East, NMPM, Lea County, New Mexico, for the purpose of treating and reclaiming sediment oil and for the collection, disposal, evaporation, or storage of produced water, drilling fluids, drill cuttings, completion fluids and other non-hazardous oilfield related waste.

PROVIDED HOWEVER THAT, the proposed oil treating plant and disposal facility shall be constructed in accordance with the engineering plat and topographic map presented as evidence in this case and in accordance with such additional conditions and requirements as may be directed by the Division Director, and shall be operated and maintained in such manner as to preclude spills and fires, and protect persons and livestock.

PROVIDED FURTHER THAT, prior to initiating operations, the facility shall be inspected by a representative of the Hobbs district office of the Division in order to determine the adequacy of fences, gates and cattleguards necessary to preclude livestock and unauthorized persons from entering and/or utilizing said facility, and also to determine the adequacy of dikes and berms needed to assure safe plant operation.

- (2) The maximum fill level in both of the proposed unlined surface pits shall be limited to a plane below the crest of the dikes surrounding the pits in order to preclude over-tapping of the dikes.
- (3) The Director of the Division shall be authorized to administratively grant approval for the expansion or modification of the proposed treating plant.
- (4) Authority for operation of the treating plant and disposal facility shall be suspended or rescinded whenever such suspension or rescission should appear necessary to protect human health or property, to protect fresh water supplies from contamination, to prevent waste, or for non-compliance with the terms and conditions of this order or Division Rules and Regulations.
- (5) Prior to constructing said facility, the applicant shall submit, to the Santa Fe office of the Division, a surety or cash bond in the amount of \$25,000 in a form approved by the Division.
- (6) Authority for operation of the treating plant and disposal facility shall be transferrable only upon written application and approval by the Division Director.
- (7) 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.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Original on file Santa Fe, New Mexico

WILLIAM J. LEMAY Director