NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

May 5, 1998

Mewbourne Oil Company
P.O. Box 7698
Tyler, Texas 75711-7698

Attn: Mr. K.M. Calvert

RE: Injection Pressure Increase Quercho Plains Bone Spring Sand Unit EOR Waterflood Project Lea County, New Mexico.

Dear Mr. Calvert:

Reference is made to your request dated September 26, 1997 and revised April 22, 1998, to increase the surface injection pressure on twelve wells in the above referenced project. This request is based on step rate tests conducted on these wells immediately prior to your original request, and additional information supplied on April 22, 1998. The results of the tests and additional data have been reviewed by my staff and we feel an increase in injection pressures on these wells is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following wells:

Well and location	*Maximum Surface Injection Pressure*
QPBSSU Well No.3-2, UL 'J' of Section 23	2325 PSIG
QPBSSU Well No.3-4, UL 'B' of Section 23	2425 PSIG
QPBSSU Well No.4-2, UL 'K' of Section 23	2450 PSIG
QPBSSU Well No.7A-10, UL 'G' of Section 27	2450 PSIG
QPBSSU Well No.7A-11, UL 'A' of Section 27	2450 PSIG
QPBSSU Well No.10-3, UL 'L' of Section 23	2450 PSIG
QPBSSU Well No.11-1, UL 'B' of Section 26	2450 PSIG
QPBSSU Well No.11-2, UL 'A' of Section 26	2420 PSIG

Well and location	***Maximum Surface Injection Pressure***
QPBSSU Well No.12B-3, UL 'J' of Section 14	2450 PSIG
QPBSSU Well No.12C-4, UL 'I' of Section 14	2400 PSIG
QPBSSU Well No.12D-2, UL 'C' of Section 26	2420 PSIG
QPBSSU Well No.16-1, UL 'L' of Section 24	2450 PSIG
All wells located in Lea County, New Mexico.	

The Division Director may rescind any injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

Lori Wrotenbery

Lori Wrotenbery
Director

LW/BES/kv

cc: Oil Conservation Division - Hobbs
Files: Case File No.10762; EOR-9; PSI-X 4th QTR 98

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

ADMINISTRATIVE ORDER NO. WFX-686

APPLICATION OF MEWBOURNE OIL COMPANY TO EXPAND ITS WATERFLOOD PROJECT IN THE QUERCHO PLAINS-UPPER BONE SPRING POOL IN LEA COUNTY, NEW MEXICO

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Division Order No. R-9737-A, Mewbourne Oil Company has made application to the Division on April 19, 1996 for permission to expand its Quercho Plains Queen Bone Spring Sand Unit Waterflood Project in the Quercho Plains-Upper Bone Spring Pool in Lea County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

(1) The application has been filed in due form.

(2) Satisfactory information has been provided that all offset operators have been duly notified of the application.

(3) No objection has been received within the waiting period as prescribed by Rule 701(B).

(4) The proposed expansion of the above referenced Quercho Plains Queen Associated Sand Unit Waterflood Project will not cause waste nor impair correlative rights.

(5) The proposed expansion is part of an approved Enhanced Oil Recovery waterflood project and should qualify for the tax credit pursuant to the "New Mexico Oil Recovery Act".

(6) The application should be approved.

IT IS THEREFORE ORDERED THAT:

The applicant, Mewbourne Oil Company, be and the same is hereby authorized to inject water into the 1st Bone Spring formation at approximately 8492 feet to approximately 8567 feet through 2 3/8-inch plastic lined tubing set in a packer at approximately 8392 feet to accomplish injection in the following described well for purposes of secondary recovery to wit:

Hanley '24' Federal Well No.1
2310' FSL and 330' FWL - Unit Letter 'L' of
Section 24, Township 18 South, Range 32 East, Lea County, New Mexico

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.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

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.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure to no more than 2000 psi, as authorized by Division Order R-9373-A.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the 1st Bone Spring formation. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity tests so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Hobbs district office of the Division of the failure of the tubing, casing or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

The subject well shall be governed by all provisions of Division Order No. R-9737-A, as amended and Rules 702-706 of the Division Rules and Regulations not inconsistent herewith.

PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for the entry of such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

DONE at Santa Fe, New Mexico, on this 21st day of May, 1996.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

S E A L

WJL/BES

cc: NM Department of Taxation and Revenue - Mr. John Chavez, Secretary
Oil Conservation Division - Hobbs
Bureau of Land Management - Carlsbad
Files: Case No.10762; EOR-9

MEWBOURNE OIL COMPANY

P.O. BOX 7698
TYLER, TEXAS 75711
903 - 561-2900
FAX 903 - 561-1870

March 23, 1995

Certified Mail No. Z 077 781 611

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87504

RE: **POSITIVE PRODUCTION RESPONSE CERTIFICATE**
Querecho Plains Bone Spring Sand Unit
Lea County, New Mexico

Gentlemen:

Mewbourne Oil Company requests administrative approval of positive production response for the referenced unit. This letter with attachments should address all rules put forth in NMOCD Order No. R-9708.

Water injection began at the referenced in November 1993. Gas-oil ratio started dropping immediately and has declined from pre-waterflood levels of 7000 scf/stb to 4000. Positive production response is apparent starting in September 1994. As a result, we seek September 1, 1994, as the effective date for positive production response. Of note, one well, the QPBSSU 3-5, originally converted to injection was converted back to production due to early breakthrough problems.

Should you have any questions or comments concerning this application, please contact me at (903) 561-2900.

Sincerely,

Kevin Mayes

Kevin Mayes, PE

Attachments: Certificate of EOR Project for Recovered Oil Tax Rate
Order No. R-9737-A
Economic Summary Sheet
Predicted Production Performance
Unit Boundary and Well Status Plat
Well Status Table
Current Production History Plot
Current Producing Well Table

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

December 6, 1993

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

Mewbourne Oil Company
Attention: K.M. Calvert
P.O. Box 7698
Tyler, TX 75711-7698

CERTIFICATION OF ENHANCED OIL RECOVERY PROJECT FOR RECOVERED OIL TAX RATE

The New Mexico Oil Conservation Division hereby certifies that the following Enhanced Oil Recovery Project has been approved by the Division as a secondary project, pursuant to the provisions of the *New Mexico Enhanced Oil Recovery Act* (Laws of 1992, Chapter 38). In order to qualify for the *Recovered Oil Tax Rate*, you must apply for certification of positive production response within five years from the date of this certification. Only production from that portion of the project area identified herein which is actually developed for enhanced recovery will qualify for the reduced tax rate.

If operation of this project is terminated for any reason, the operator of the project must notify this Division and the Secretary of the Taxation and Revenue Department not later than the thirtieth day after termination.

NAME OF PROJECT:	Quercho Plains Bone Spring Sand Unit Waterflood Project (Quercho Plains Bone Spring Sand Unit)
OCD ORDER NO.	R-9737-A
OPERATOR:	Mewbourne Oil Company
ADDRESS:	Attention: K.M. Calvert P.O. Box 7698 Tyler, TX 75711-7698
CERTIFICATION DATE:	November 1, 1993

PROJECT AREA:

Township 18 South, Range 32 East, NMPM

Section 13: SW/4 SW/4
Section 14: SE/4
Section 22: SE/4 SE/4
Section 23: NE/4 S/2 NW/4 and S/2

Section 24:	W/2 NW/4 and SW/4 SW/4
Section 26:	N/2 NE/4, SW/4 NE/4 and NW/4
Section 27:	E/2 NE/4, SW/4 NE/4, SE/4 NW/4 and E/2 SW/4

APPROVED BY:

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
DIRECTOR

SEAL

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. 10762
Order No. R-9737-A

APPLICATION OF MEWBOURNE OIL COMPANY FOR A WATERFLOOD PROJECT AND QUALIFICATION FOR THE RECOVERED OIL TAX RATE, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on July 1, 1993, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 13th day of October, 1993, 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) At the time of the hearing this case was consolidated with Division Case No. 10761 for the purpose of testimony.

(3) By Division Order No. R-9737, issued in Case No. 10497 and dated October 1, 1992, Mewbourne Oil Company was authorized to convert its Government "K" Well No. 2, located 1950 feet from the South line and 1980 feet from the West line (Unit K) of Section 23, and its Federal "E" Well No. 11, located 660 feet from the North line and 530 feet from the East line (Unit A) of Section 27, both in Township 18 South,

Range 32 East, NMPM, Lea County, New Mexico, into water injection wells for the purpose of testing the "injectivity" of the Querecho Plains-Upper Bone Spring Pool for a sufficient period of time to establish stabilized injection rates in order to determine the feasibility of commencing a waterflood project in this general area to be unitized at a later date.

(4) The applicant, Mewbourne Oil Company, at this time seeks authority to institute a waterflood project in its proposed Querecho Plains Bone Spring Sand Unit Area (Division Case No. 10761), Lea County, New Mexico, by the injection of water into the designated and Undesignated Querecho Plains-Upper Bone Spring Pool, as found in that stratigraphic interval between 8,328 feet to 8,620 feet as measured on the *Welex - Spectral Density Dual Spaced Neutron Log* ran on November 28, 1987 in the applicant's Federal Well No. 4 located 660 feet from the North line and 1650 feet from the East line (Unit B) of Section 23, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico, through fifteen certain wells to be converted from producing wells to injectors, as further described in Exhibit "A" attached hereto and made a part hereof.

(5) It is proposed that the waterflood project area coincide with the boundary of the Querecho Plains Bone Spring Sand Unit Area in Lea County, New Mexico, as further described below, which was the subject of Division Case No. 10761 and was heard in combination with this case:

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM

Section 13:	S/2 SW/4
Section 14:	SE/4
Section 22:	NE/4 SE/4 and S/2 SE/4
Section 23:	All
Section 24:	W/2 NW/4 and SW/4 SW/4
Section 26:	N/2
Section 27:	All
Section 28:	E/2

(6) The above-described area contains several tracts of undeveloped acreage; therefore, in compliance with Division General Rule 701.G(1) the project area as requested should be reduced to include only those oil spacing and proration units within the proposed area that have experienced production from the Querecho Plains-Upper Bone Spring Pool, being the following described 2,040 acres in Lea County, New Mexico:

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM
Section 13: SW/4 SW/4
Section 14: SE/4
Section 22: SE/4 SE/4
Section 23: NE/4, S/2 NW/4 and S/2
Section 24: W/2 NW/4 and SW/4 SW/4
Section 26: N/2 NE/4, SW/4 NE/4 and NW/4
Section 27: E/2 NE/4, SW/4 NE/4, SE/4 NW/4 and E/2 SW/4

(7) The present Upper Bone Spring oil producing wells within the subject project area are in an advanced state of depletion and should therefore be properly classified as "stripper wells".

(8) The results of the injectivity test approved by said Order No. R-9737 indicates that both of the test wells are capable of injection rates of 700 to 800 barrels of water per day at the maximum injection pressure of 1650 psi permitted by said Order No. R-9737. Further, injection surveys from both wells indicated that the injected waters remained confined to the Upper Bone Spring interval.

(9) The applicant further requests a surface limitation pressure in excess of the Division's guidelines of 0.2 psi per foot of depth, but not in excess of 2,000 psi surface pressure.

(10) In support of this request the applicant presented additional results from its injectivity tests, showing that the Delaware produced water utilized for injection had a gradient hydrostatic head of 0.51 psi per foot. While injecting this "heavy water" at the maximum 1650 psi (as permitted by Order R-9737) the total gradient hydrostatic head generated at depth was equal to 0.70 psi per foot. The applicant testified that the average formation fracture gradient for the Querecho Plains-Upper Bone Spring Pool is equal to 0.74 psi per foot as determined by the initial shut-in pressures from fracture stimulations which were performed on several wells in the general area. Injected waters to be utilized in this project initially will consist of fresh water to be purchased from the City of Carlsbad, New Mexico (approximately 90 percent of volume) with the remaining volume to be produced salt water from surrounding operators. The fluid gradient for this "less heavy" water is expected to be approximately 0.45 psi per foot. With a 2,000 psi pressure limit at the surface the total gradient hydrostatic head generated at depth calculates out at 0.69 psi per foot, which is below the fracture gradient for the pool.

(11) The increase in surface injection pressure as requested by the applicant is not expected to have an adverse effect on the unitized interval, further the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(12) The operator of the proposed Querecho Plains Bone Spring Sand Unit Waterflood Project should take all steps necessary to ensure that the injected water enters and remains confined to only the proposed injection interval (Upper Bone Spring zone) and is not permitted to escape from that interval and migrate into other formations, producing intervals, pools or onto the surface from injection, production, or plugged and abandoned wells.

(13) The previously plugged and abandoned BTA Oil Producers Cinco de Mayo Federal Well No. 1, the former Ralph Lowe Yates-Federal Well No. 1, located 660 feet from the North line and 1980 feet from the West line (Unit C) of Section 24, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico, is located within the one-half mile "area of review" of the proposed Federal "P" (water inject) Well No. 1, located 660 feet from the North and West lines (Unit D) of said Section 24.

Prior to commencement of injection into said Federal "P" Well No. 1, the operator should demonstrate to the satisfaction of the supervisor of the Division's District Office in Hobbs that the BTA Oil Producers Cinco de Mayo Federal Well No. 1, the former Ralph Lowe Yates-Federal Well No. 1, as described above, has been re-entered and replugged in such a manner as to ensure that it does not provide an avenue of escape for waters from the proposed injection interval.

(14) Likewise, the previously plugged and abandoned Lewis B. Burleson, Inc. Anadarko Federal Well No. 1, located 660 feet from the South line and 1980 feet from the West line (Unit N) of Section 27, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico, is located within the one-half mile "area of review" of the proposed Federal "E" (water inject) Well No. 10, located 2310 feet from the North and East lines (Unit G) of said Section 27.

Prior to commencement of injection into said Federal "E" Well No. 10, the operator should demonstrate to the satisfaction of the supervisor of the Division's District Office in Hobbs that the Lewis B. Burleson, Inc. Anadarko Federal Well No. 1, as described above, has either been re-entered and replugged or has previously been plugged and abandoned in such a manner as to ensure that it does not provide an avenue of escape for waters from the proposed injection interval of the Mewbourne well or that said wellbore will not otherwise serve for such escape.

(15) From the evidence presented at the hearing it appears the applicant's existing Federal "E" Well No. 1, located 660 feet from the North line and 1980 feet from the East line (Unit B) of Section 27, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico, which is also within this "area of review" and currently completed in and producing from the North Lusk-Morrow Gas Pool, is not cemented or completed in such a manner which will prevent the migration of fluid from the proposed injection zone.

Therefore, prior to commencing injection operations into the Federal "E" Well Nos. 10 and 11 located in Units "G" and "A", respectively, of said Section 27 the operator should demonstrate to the satisfaction of the supervisor of the Division's District Office in Hobbs that the Federal "E" Well No. 1, as described above, has either been recompleted or is shown to have been previously completed in such a manner as to ensure that they do not provide an avenue of escape for waters from the proposed injection interval of the Mewbourne Morrow gas well or that said wellbore will not otherwise serve for such escape.

(16) Sufficient evidence on the corrosive nature of the proposed injection fluid was submitted by the applicant to support its request to utilize "bare steel" tubing instead of internally plastic-coated tubing at this time.

(17) The injection of water into the proposed injection wells should be accomplished either through 2 3/8-inch or 2 7/8-inch steel tubing installed in a packer set within 100 feet of the uppermost injection perforation; the casing-tubing annulus should be filled with an inert fluid and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(18) Prior to commencing injection operations into the proposed injection wells, the casing in each 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.

(19) The injection wells or pressurization system for each well should be so equipped as to limit injection pressure at the wellhead to no more than 2,000 psi.

(20) Any further increase in the injection pressure limitation placed upon any well in the project area should only be approved after proper notice and hearing.

(21) The operator should give advance notification to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure-tests in order that the same may be witnessed.

(22) The proposed waterflood project should be approved and the project should be governed by the provisions of Rule Nos. 701 through 708 of the Oil Conservation Division Rules and Regulations.

(23) The applicant further requests that the subject waterflood project be approved by the Division as a qualified "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(24) The evidence presented indicates that the subject waterflood project meets all the criteria for approval.

(25) The approved "project area" should initially comprise that area described in Finding Paragraph No. (6) above.

(26) To be eligible for the EOR credit, prior to commencing injection operations, the operator must request from the Division a Certificate of Qualification, which certificate will specify the proposed project area as described above.

(27) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to the Department of Taxation and Revenue those lands and wells which are eligible for the credit.

(28) The injection authority granted herein for the proposed injection wells should terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Mewbourne Oil Company, is hereby authorized to institute a waterflood project in its Querecho Plains Bone Spring Sand Unit Area (Division Case No. 10761), Lea County, New Mexico, by the injection of water into the designated and Undesignated Querecho Plains-Upper Bone Spring Pool (as found in that stratigraphic interval between 8,328 feet to 8,620 feet as measured on the *Welex - Spectral Density Dual Spaced Neutron Log* ran on November 28, 1987 in the applicant's Federal Well

No. 4 located 660 feet from the North line and 1650 feet from the East line (Unit B) of Section 23, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico) through fifteen certain wells to be converted from producing wells to injectors, as further described in Exhibit "A" attached hereto and made a part hereof.

(2) The waterflood project, hereby designated the Querecho Plains Bone Spring Sand Unit Waterflood Project, shall coincide with the boundary of the Querecho Plains Bone Spring Sand Unit Area, as further described below, and was the subject of Division Case No. 10761 which was heard in combination with this case:

QUERECHO PLAINS BONE SPRING SAND UNIT WATERFLOOD PROJECT
LEA COUNTY, NEW MEXICO

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM

Section 13:	S/2 SW/4
Section 14:	SE/4
Section 22:	NE/4 SE/4 and S/2 SE/4
Section 23:	All
Section 24:	W/2 NW/4 and SW/4 SW/4
Section 26:	N/2
Section 27:	All
Section 28:	E/2

(3) However, the initial waterflood project area, for allowable and tax credit purposes shall comprise only the following described 2040 acres in Lea County, New Mexico:

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM

Section 13:	SW/4 SW/4
Section 14:	SE/4
Section 22:	SE/4 SE/4
Section 23:	NE/4, S/2 NW/4 and S/2
Section 24:	W/2 NW/4 and SW/4 SW/4
Section 26:	N/2 NE/4, SW/4 NE/4 and NW/4
Section 27:	E/2 NE/4, SW/4 NE/4, SE/4 NW/4 and E/2 SW/4

(4) The applicant must take all steps necessary to ensure that the injected water only enters and remains confined to the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

PROVIDED HOWEVER THAT:

(5) Injection into the Federal "P" Well No. 1, located 660 feet from the North and West lines (Unit D) of Section 24, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico, shall not commence until the previously plugged and abandoned BTA Oil Producers Cinco de Mayo Federal Well No. 1, the former Ralph Lowe Yates-Federal Well No. 1, located 660 feet from the North line and 1980 feet from the West line (Unit C) of said Section 24, has either been re-entered and replugged or is shown to have been adequately plugged and abandoned in a manner that ensures it does not provide an avenue of escape for waters from the proposed injection interval to the satisfaction of the Supervisor of the Division's District Office in Hobbs.

(6) FURTHER, injection into the Federal "E" Well No. 10, located 2310 feet from the North and East lines (Unit G) of Section 27, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico, shall not commence until the previously plugged and abandoned Lewis B. Burleson, Inc. Anadarko Federal Well No. 1, located 660 feet from the South line and 1980 feet from the West line (Unit N) of said Section 27, has either been re-entered and re-plugged or is shown to have been adequately plugged and abandoned in a manner that ensures it does not provide an avenue of escape for waters from the proposed injection interval to the satisfaction of the Supervisor of the Division's District Office in Hobbs.

(7) ALSO, injection into the Federal "E" Well Nos. 10 and 11 located in Units "G" and "A", respectively, of said Section 27, shall not commence until the applicant's Federal "E" Well No. 1, located 660 feet from the North line and 1980 feet from the East line (Unit B) of said Section 27, has either been recompleted or is shown to have been previously completed in such a manner as to ensure that they do not provide an avenue of escape for waters from the proposed injection interval to the satisfaction of the Supervisor of the Division's District Office in Hobbs.

IT IS FURTHER ORDERED THAT:

(8) Injection shall be accomplished through 2 3/8-inch or 2 7/8-inch bare steel tubing installed in a packer set approximately within 100 feet of the uppermost injection perforation; the casing-tubing annulus in each well shall be filled with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.

(9) The injection wells or pressurization system for each injection well shall be so equipped as to limit injection pressure at the wellhead to no more than 2,000 psi.

(10) Any additional increase in the injection pressure limitation placed upon any well in the project area shall only be approved after proper notice and hearing.

(11) Prior to commencing injection operations, the casing in each injection well shall be pressure-tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(12) The operator shall give advance notification to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

(13) The applicant shall immediately notify the supervisor of the Hobbs District Office of the Division of the failure of the tubing, casing or packer in any of the injection wells, the leakage of water or oil from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area, and shall take such steps as may be timely and necessary to correct such failure or leakage.

(14) The applicant shall conduct injection operations in accordance with Division Rule Nos. 701 through 708 and shall submit monthly progress reports in accordance with Division Rule Nos. 706 and 1115.

FURTHERMORE:

(15) The subject waterflood project is hereby approved as an "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(16) The approved "project area" shall initially comprise that area described in Decretory Paragraph No. (3) above.

(17) To be eligible for the EOR credit, prior to commencing injection operations, the operator must request from the Division a Certificate of Qualification, which certificate will specify the proposed project area as described above.

(18) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells

which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to the Department of Taxation and Revenue those lands and wells which are eligible for the credit.

(19) The injection authority granted herein for the proposed injection wells shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

(20) 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

WILLIAM J. LeMAY
Director

SEAL

EXHIBIT "A"

CASE NO. 10762
ORDER NO. R-9737-A

Mewbourne Oil Company

Proposed Injection Well Locations
Querecho Plains Bone Spring Sand Unit Waterflood Project Area
Township 18 South, Range 32 East, NMPM,
Lea County, New Mexico

Well Name and Number	Footage Location	Section	Unit	Proposed Injection Interval (Feet)
Santa Fe Energy Operating Partners, L.P. Shinnery "14" Federal Well No. 4	1980'FSL - 660'FEL	14	I	8412 - 8490
Santa Fe Energy Operating Partners, L.P. Shinnery "14" Federal Well No. 3	1980'FS & EL	14	J	8478 - 8504
Federal "L" Well No. 5	660' FN & EL	23	A	8430 - 8574
Federal "L" Well No. 4	660'FNL - 1650'FEL	23	B	8431 - 8506
Federal "L" Well No. 7	2310'FSL - 990'FEL	23	I	8485 - 8552
Federal "L" Well No. 2	2130'FSL - 2030'FEL	23	J	8458 - 8531
Government "K" Well No. 2	1950'FSL - 1980'FWL	23	K	8343 - 8515
Federal "F" Well No. 3	1980'FSL - 990'FWL	23	L	8362 - 8436
Federal "P" Well No. 1	660'FN & WL	24	D	8473 - 8545
Burleson Federal Well No. 2	660'FN & EL	26	A	8515 - 8584
Burleson Federal Well No. 1	660'FNL - 2310'FEL	26	B	8512 - 8572
Sprinkle Federal Well No. 2	660'FNL - 1980'FWL	26	C	8542 - 8574
Sprinkle Federal Well No. 1	660'FN & WL	26	D	8507 - 8532
Federal "E" Well No. 11	660'FNL - 530'FEL	27	A	8360 - 8388
Federal "E" Well No. 10	2310'FN & EL	27	G	8501 - 8530

QUERECHO PLAINS BONE SPRING SAND UNIT

LEA COUNTY, NEW MEXICO

INITIAL CAPITAL INVESTMENT

Installation	$2,050,000
Pre-Unitization	422,000
Government K #2 Injection Test	180,000
Federal E #11 Injection Test	148,000
	$2,850,000

INCREMENTAL ECONOMIC EVALUATION

	Present Worth Undisc. (M$)	ROI Undiscounted	Present Worth Discounted @ 10% (M$)	ROI Disc. @ 10%	IRR (%)
Working Int. (Total Group)	13,820	5.9:1	7,030	3.5:1	52
Royalty Int. (BLM)	2,410	N/A	1,270	N/A	N/A
ORRI Interests (Total Group)	3,020	N/A	1,590	N/A	N/A

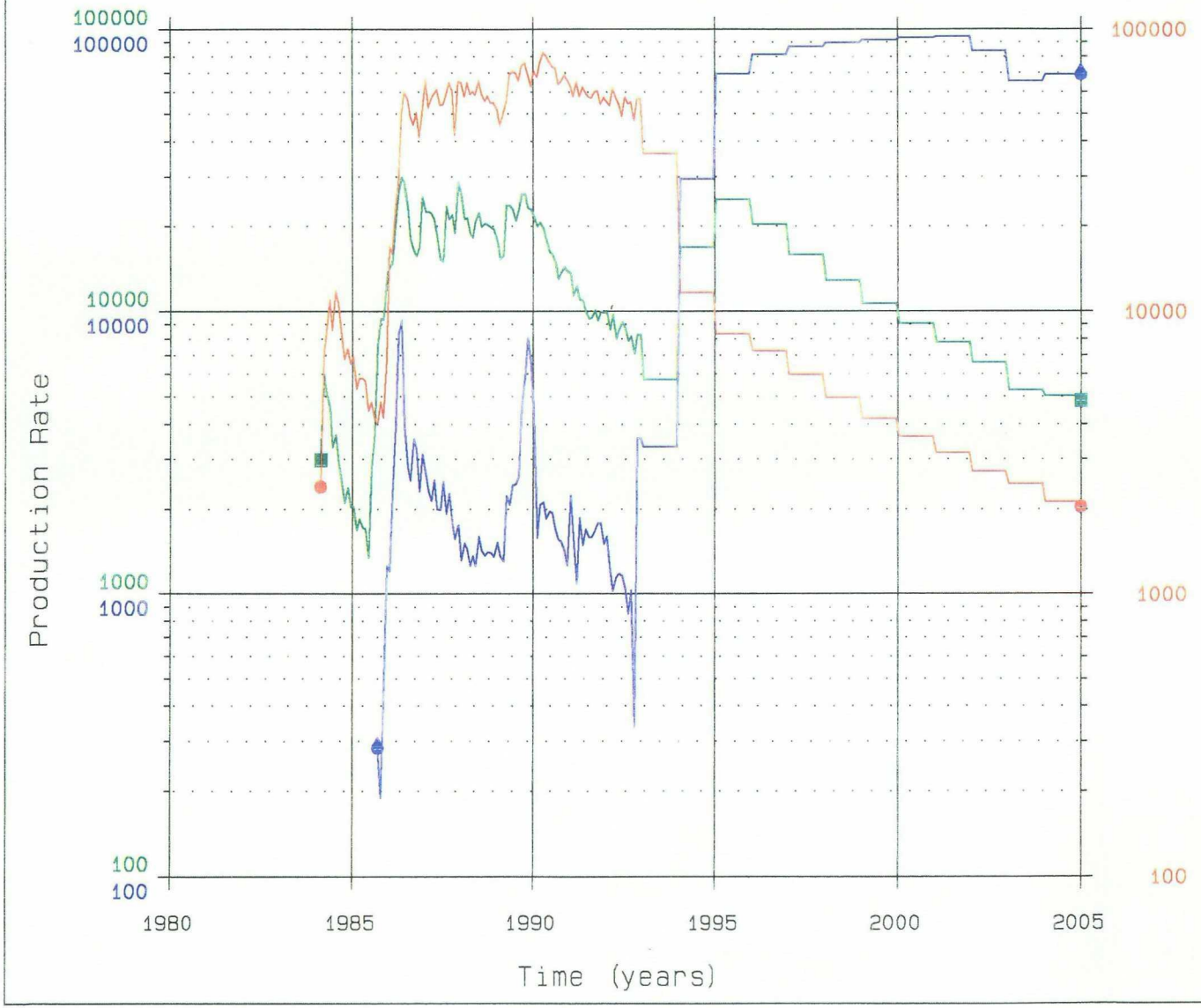
MEWBOURNE OIL CO.

Multiphase Curve Analysis

Rate vs Time

6/07/1993

Project:
UCASE23A

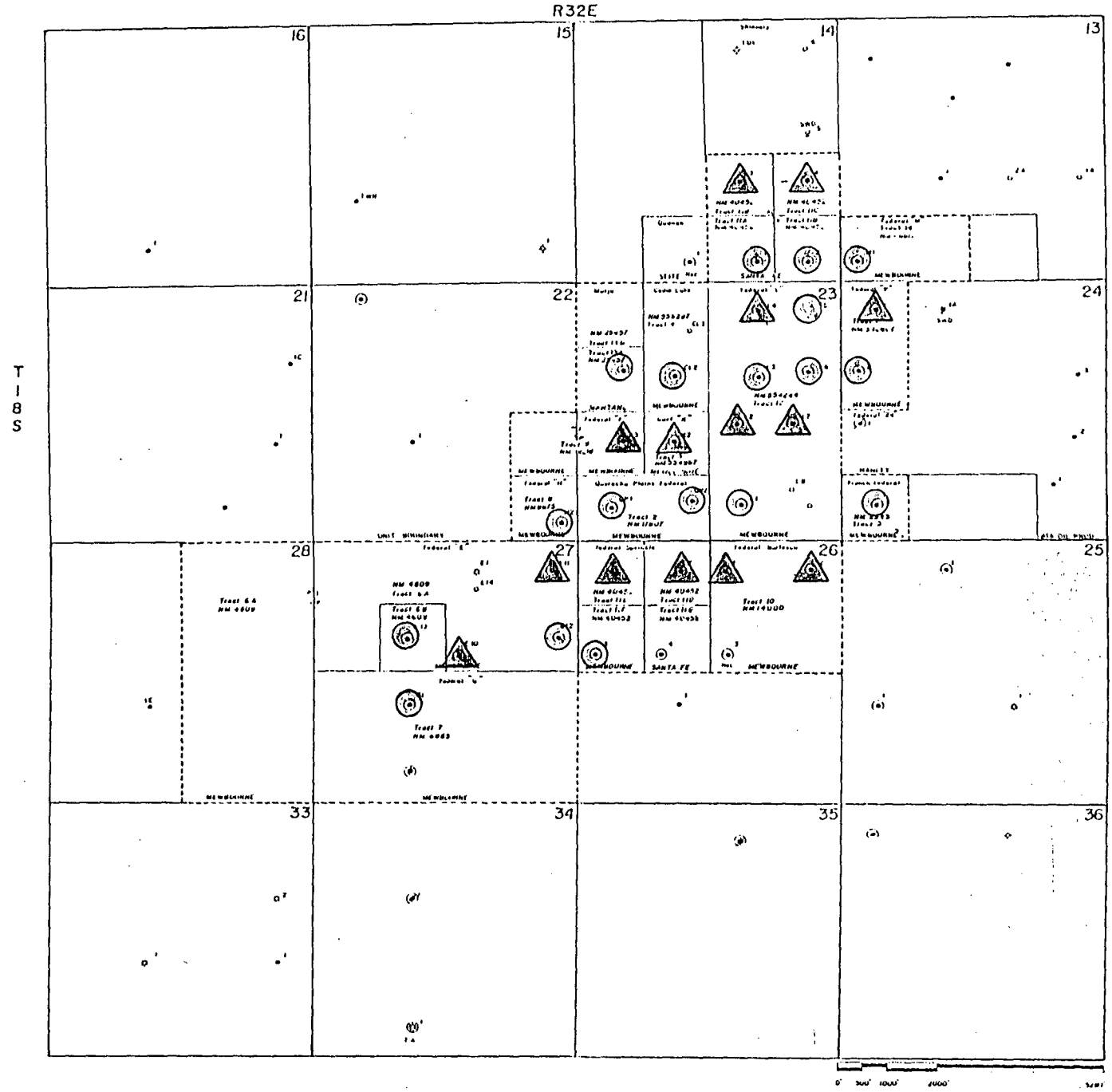


Production Curves

OIL: ■ OIL DATA
0 History 2/84 - 10/92
1 List Mode 11/92 - 12/15

GAS: ● GAS DATA
0 History 2/84 - 10/92
1 List Mode 11/92 - 12/15

WTR: ◆ WATER DATA
0 History 9/85 - 10/92
1 List Mode 11/92 - 12/15



△ FULL FLOOD INJECTION PATTERN

14 Injectors
18 Producers

MOC MEWBOURNE OIL CO.
TYLER, TEXAS

QUERECHO PLAINS
LEA COUNTY, NEW MEXICO

QUERECHO PLAINS BONE SPRING
EXHIBIT "A" UNIT AGREEMENT

QUERECHO PLAINS BONE SPRING SAND UNIT

T18S, R32E, Lea County, New Mexico

Well No.	Location	Completion Date	Status
QPBSSU 15-1	13M	03/24/89	P
QPBSSU 12C-4	14I	08/21/89	I
QPBSSU 12B-3	14J	06/17/89	I
QPBSSU 12A-1	14O	02/07/89	P
QPBSSU 12B-2	14P	06/16/89	P
QPBSSU 9-2	22P	04/05/86	P
QPBSSU 3-5	23A	12/09/87	P
QPBSSU 3-4	23B	05/26/86	I
QPBSSU 14A-1	23E	10/06/87	P
QPBSSU 5-2	23F	12/13/86	P
QPBSSU 3-3	23G	08/05/87	P
QPBSSU 3-6	23H	08/30/88	P
QPBSSU 3-7	23I	06/14/88	I
QPBSSU 3-2	23J	11/19/86	I
QPBSSU 4-2	23K	11/11/86	I
QPBSSU 10-3	23L	02/04/87	I
QPBSSU 13-1	23M	02/15/86	P
QPBSSU 13-2	23N	06/05/86	P
QPBSSU 3-1	23O	05/24/86	P
QPBSSU 2A-1	24D	05/07/89	I
QPBSSU 2B-2	24E	09/30/89	P
QPBSSU 6-1	24M	03/19/86	P
QPBSSU 11-2	26A	02/24/86	I
QPBSSU 11-1	26B	12/10/85	I
QPBSSU 12D-2	26C	11/12/85	I
QPBSSU 12E-1	26D	08/06/85	I
QPBSSU 12F-3	26E	04/10/86	P
QPBSSU 7A-11	27A	01/19/86	I
QPBSSU 7B-13	27F	10/09/87	P
QPBSSU 7A-10	27G	07/14/85	I
QPBSSU 7A-12	27H	04/27/86	P
QPBSSU 8-1	27K	02/15/84	P


LEASE : QPBSSU
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C=1673.317
GAS-MCF 02/95 C=5839.170
INJ-BBLS 02/95 C=1643.502
WTR-BBLS 02/95 C= 534.475
GOR 02/95 C= 527.024
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
100
1000
10000
100000
1000000
10000000
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

PRODUCING WELLS
QUERECHO PLAINS BONE SPRING SAND UNIT
T18S, R32E, Lea County, New Mexico

Well No.	Location	Completion Date	Status
QPBSSU 15-1	13M	03/24/89	P
QPBSSU 12A-1	14O	02/07/89	P
QPBSSU 12B-2	14P	06/16/89	P
QPBSSU 9-2	22P	04/05/86	P
QPBSSU 3-5	23A	12/09/87	P
QPBSSU 14A-1	23E	10/06/87	P
QPBSSU 5-2	23F	12/13/86	P
QPBSSU 3-3	23G	08/05/87	P
QPBSSU 3-6	23H	08/30/88	P
QPBSSU 13-1	23M	02/15/86	P
QPBSSU 13-2	23N	06/05/86	P
QPBSSU 3-1	23O	05/24/86	P
QPBSSU 2B-2	24E	09/30/89	P
QPBSSU 6-1	24M	03/19/86	P
QPBSSU 12F-3	26E	04/10/86	P
QPBSSU 7B-13	27F	10/09/87	P
QPBSSU 7A-12	27H	04/27/86	P
QPBSSU 8-1	27K	02/15/84	P

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505

New Mexico DRUG FREE It's a State of Mind!

July 7, 1995

Department of Taxation and Revenue
P.O. Box 630
Santa Fe, New Mexico 87509-0630

Attention: Mr. John Chavez, Secretary

RE: Certification of a Positive Production Response, Mewbourne Oil Company Querecho Plains Bone Spring Sand Unit Waterflood Project

Dear Secretary Chavez:

Enclosed is a copy of a Division Certification which was issued on July 7, 1995. This document certifies that a positive production response has occurred within the Querecho Plains Bone Spring Sand Unit Waterflood Project Area which is currently operated by Mewbourne Oil Company. In addition, this positive production response has occurred within the five year time limit as described within the "New Mexico Enhanced Oil Recovery Act". The Division has determined that all wells within the certified area producing from the Querecho Plains Upper-Bone Spring Pool are eligible for the recovered oil tax rate. These wells are shown on Exhibit "A" to the Division Certification.

For your convenience we have also enclosed a summary page showing all pertinent data. If additional information is required please advise.

Sincerely,

William J. LeMay
Director

WJL/DRC

Enclosures

VILLAGRA BUILDING - 408 Galisteo
Forestry and Resources Conservation Division
P.O. Box 1948 87504-1948
827-5830
Park and Recreation Division
P.O. Box 1147 87504-1147
827-7465

2040 South Pacheco
Office of the Secretary
827-5950
Administrative Services
827-5925
Energy Conservation & Management
827-5900
Mining and Minerals
827-5970
Oil Conservation
827-7131

POSITIVE PRODUCTION RESPONSE DATA
QUERECHO PLAINS BONE SPRING SAND UNIT WATERFLOOD PROJECT

NAME OF PROJECT

Querecho Plains Bone Spring Sand Unit
Waterflood Project

OPERATOR

Mewbourne Oil Company
P.O. Box 7698
Tyler, Texas 75711
Attention: Mr. Kevin Mayes

POOL

Querecho Plains Upper-Bone Spring Pool

OCD ORDER NO. APPROVING WATERFLOOD PROJECT & DATE

R-9737-A, October 13, 1993

PROJECT AREA

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM

Section 13: SW/4 SW/4
Section 14: SE/4
Section 22: SE/4 SE/4
Section 23: NE/4, S/2 NW/4, S/2
Section 24: W/2 NW/4, SW/4 SW/4
Section 26: N/2 NE/4, SW/4 NE/4, NW/4
Section 27: E/2 NE/4, SW/4 NE/4, SE/4 NW/4, E/2 SW/4

DATE WATER INJECTION COMMENCED

November, 1993

DATE CERTIFIED PROJECT TO TAXATION & REVENUE

December 6, 1993

DATE POSITIVE PRODUCTION RESPONSE OCCURRED

September 1, 1994

CURRENT NUMBER OF WELLS WITHIN PROJECT AREA

Injection: 15
Production: 18

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505

New Mexico DRUG FREE It's a State of Mind!

July 7, 1995

Mewbourne Oil Company
P.O. Box 7698
Tyler, Texas 75711

Attention: Mr. Kevin Mayes, P.E.

Re: Positive Production Response
Querecho Plains Bone Spring Sand Unit

Dear Mr. Mayes:

Pursuant to your request dated March 23, 1995, please be advised that the Division hereby certifies that a positive production response occurred within the Querecho Plains Bone Spring Sand Unit Waterflood Project on September 1, 1994.

All Querecho Plains Upper-Bone Spring Pool producing wells within the following described area, which currently number eighteen as shown on Exhibit "A" attached hereto, shall be eligible for the recovered oil tax rate:

QUERECHO PLAINS BONE SPRING SAND UNIT WF PROJECT

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM

Section 13: SW/4 SW/4
Section 14: SE/4
Section 22: SE/4 SE/4
Section 23: NE/4, S/2 NW/4, S/2
Section 24: W/2 NW/4, SW/4 SW/4
Section 26: N/2 NE/4, SW/4 NE/4, NW/4
Section 27: E/2 NE/4, SW/4 NE/4, SE/4 NW/4, E/2 SW/4

Mewbourne shall notify the Division:

a) of the change in status of any of the producing wells shown on Exhibit "A";

b) in the event new producing wells are drilled within the project area;

c) of changes in operations within the unit which may affect the certification and resulting tax rate granted herein.

VILLAGRA BUILDING - 408 Galisteo
Forestry and Resources Conservation Division
P.O. Box 1948 87504-1948
827-5830
Park and Recreation Division
P.O. Box 1147 87504-1147
827-7465

2040 South Pacheco
Office of the Secretary
827-5950
Administrative Services
827-5925
Energy Conservation & Management
827-5900
Mining and Minerals
827-5970
Oil Conservation
827-7131

The Division Director shall notify the Secretary of the New Mexico Taxation and Revenue Department of the certification granted herein.

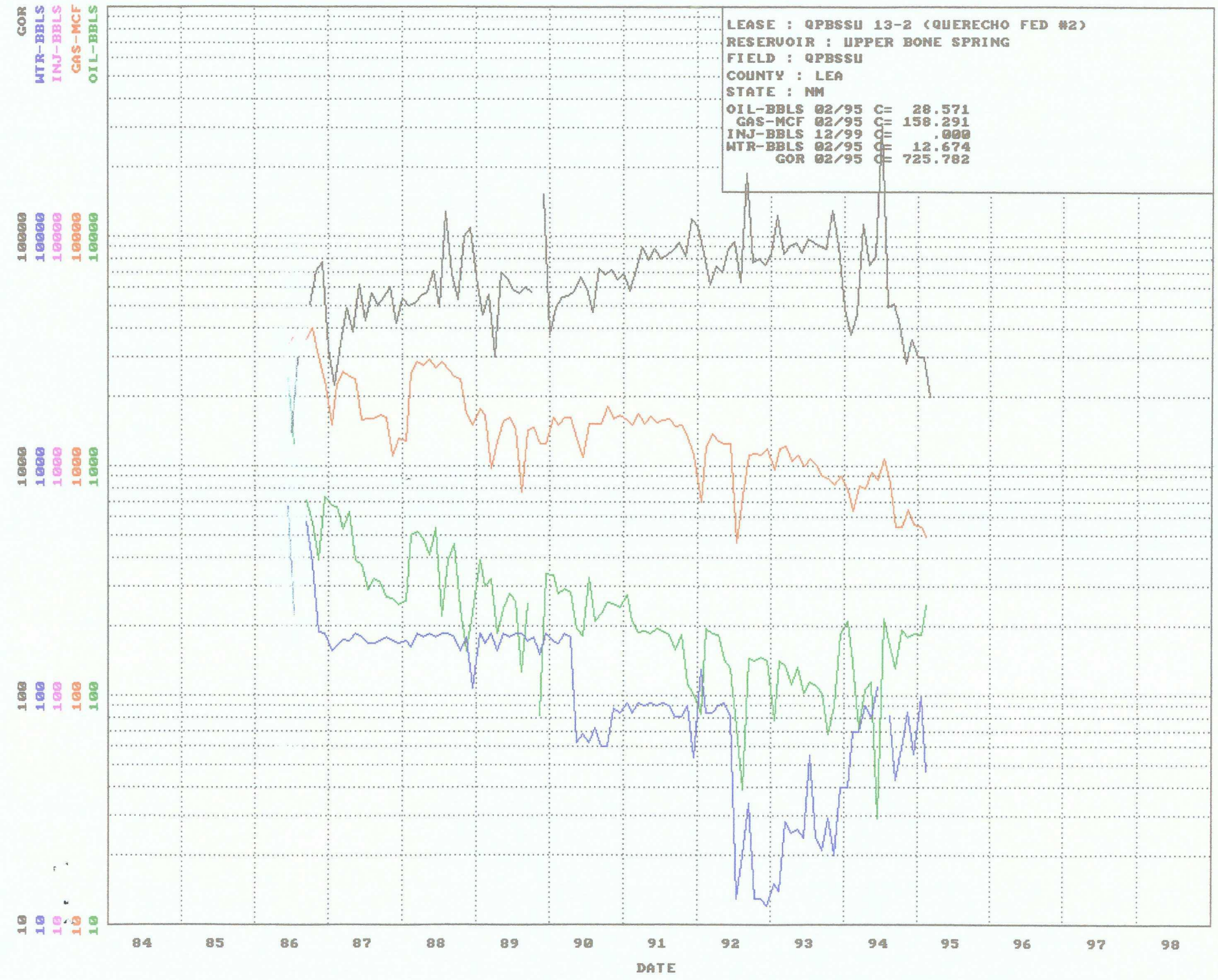
Sincerely,

William J. LeMay
Division Director

xc: File-EOR-19

EXHIBIT "A"
QUERECHO PLAINS BONE SPRING SAND UNIT
PRODUCING WELLS

API NO.	QPBSSU WELL NO.	WELL LOCATION - UL-S-T-R
30-025-30462	15-1	M-13-18S-32E
30-025-30478	12A-1	O-14-18S-32E
30-025-30569	12B-2	P-14-18S-32E
30-025-29628	9-2	P-22-18S-32E
30-025-30341	3-5	A-23-18S-32E
30-025-29938	14A-1	E-23-18S-32E
30-025-29790	5-2	F-23-18S-32E
30-025-29954	3-3	G-23-18S-32E
30-025-30342	3-6	H-23-18S-32E
30-025-29537	13-1	M-23-18S-32E
30-025-29679	13-2	N-23-18S-32E
30-025-29674	3-1	O-23-18S-32E
30-025-30636	2B-2	E-24-18S-32E
30-025-29623	6-1	M-24-18S-32E
30-025-29616	12F-3	E-26-18S-32E
30-025-29994	7B-13	F-27-18S-32E
30-025-29629	7A-12	H-27-18S-32E
30-025-25894	8-1	K-27-18S-32E


LEASE : QPBSSU 13-2 (QUERECHO FED #2)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 28.571
GAS-MCF 02/95 C= 158.291
INJ-BBLS 12/99 C= .000
WTR-BBLS 02/95 C= 12.674
GOR 02/95 C= 725.782
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
100000
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	25018	136042	11423	0	5438
1/93	78	965	15	0	12372
2/93	142	1190	14	0	8380
3/93	135	1217	28	0	9015
4/93	112	1050	25	0	9375
5/93	133	1125	26	0	8459
6/93	102	997	24	0	9775
7/93	114	1075	55	0	9430
8/93	111	1009	24	0	9090
9/93	103	908	21	0	8816
10/93	68	884	29	0	13000
11/93	91	831	20	0	9132
12/93	187	903	40	0	4829
TOT/93	1376	12154	321	0	8833
1/94	210	785	40	0	3738
2/94	140	641	70	0	4579
3/94	72	816	70	0	11333
4/94	106	798	90	0	7528
5/94	115	939	80	0	8165
6/94	29	877	109	0	30241
7/94	217	1073	0	0	4945
8/94	165	838	82	0	5079
9/94	131	542	43	0	4137
10/94	194	542	59	0	2794
11/94	180	643	85	0	3572
12/94	187	560	56	0	2995
TOT/94	1746	9054	784	0	5186
TOTAL	28140	157250	12528	0	5588


LEASE : QPBSSU 6-1 (FRENCH FED #1)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 22.038
GAS-MCF 02/95 C= 5.929
INJ-BBLS 12/99 C= .000
WTR-BBLS 02/95 C= 20.274
GOR 02/95 C= 54.791
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
10000
1000
100
0
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

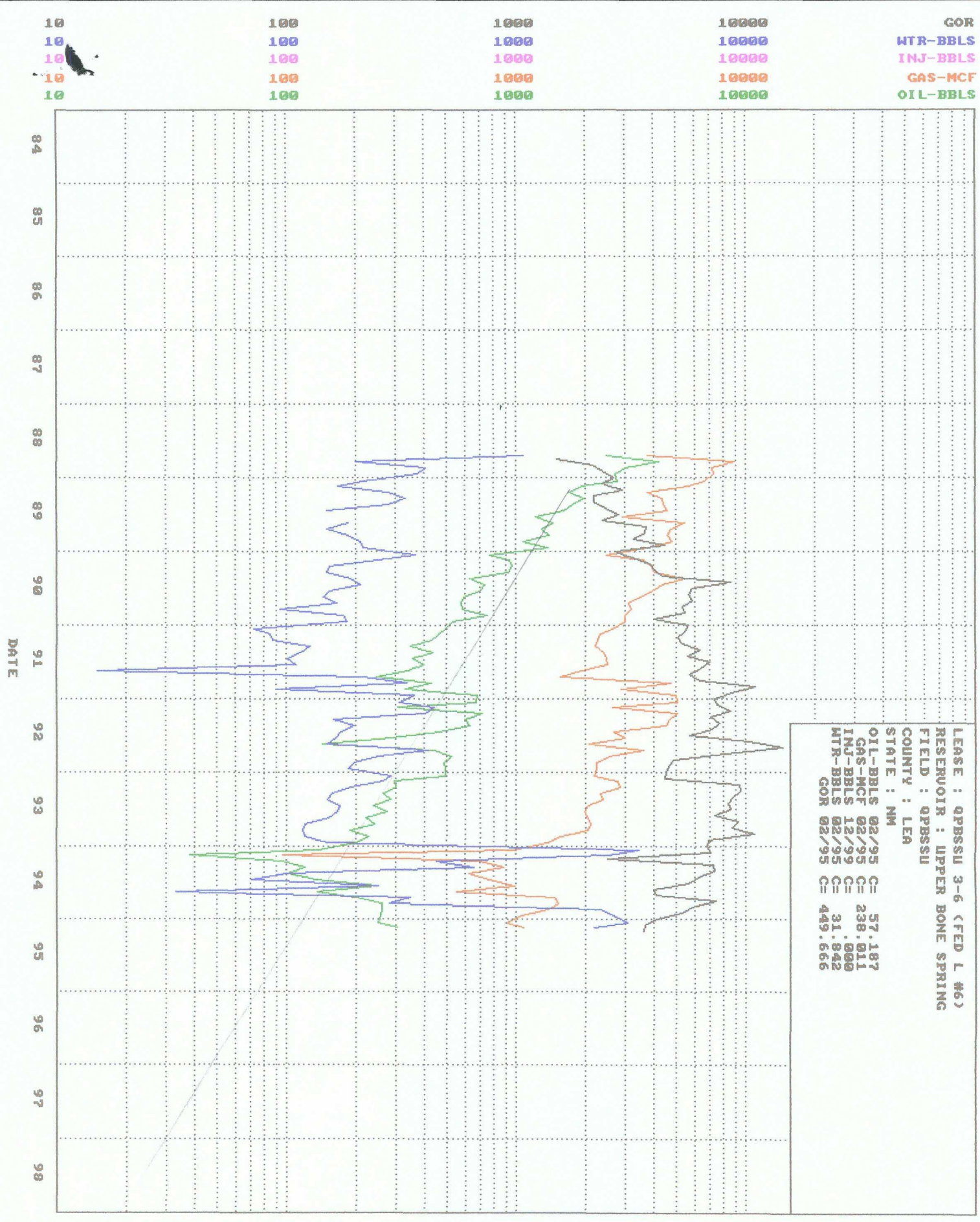
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	18549	0	7644	0	0
1/93	269	0	4890	0	0
2/93	144	0	2727	0	0
3/93	0	0	0	0	0
4/93	0	0	593	0	0
5/93	300	0	739	0	0
6/93	251	0	280	0	0
7/93	214	0	188	0	0
8/93	186	0	171	0	0
9/93	160	0	142	0	0
10/93	133	0	152	0	0
11/93	136	463	125	0	3404
12/93	153	374	210	0	2444
TOT/93	1946	837	10217	0	430
1/94	186	392	150	0	2108
2/94	155	215	160	0	1387
3/94	94	306	200	0	3255
4/94	107	449	200	0	4196
5/94	115	626	200	0	5443
6/94	112	433	158	0	3866
7/94	136	379	182	0	2787
8/94	73	387	160	0	5301
9/94	77	233	141	0	3026
10/94	97	375	159	0	3866
11/94	87	521	215	0	5989
12/94	97	263	110	0	2711
TOT/94	1336	4579	2035	0	3427
TOTAL	21831	5416	19896	0	248


LEASE : QPBSSU 15-1 (FED M #1)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 60.691
GAS-MCF 02/95 C= 223.685
INJ-BBLS 12/99 C= .000
WTR-BBLS 02/95 C= 14.571
GOR 02/95 C= 350.140
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

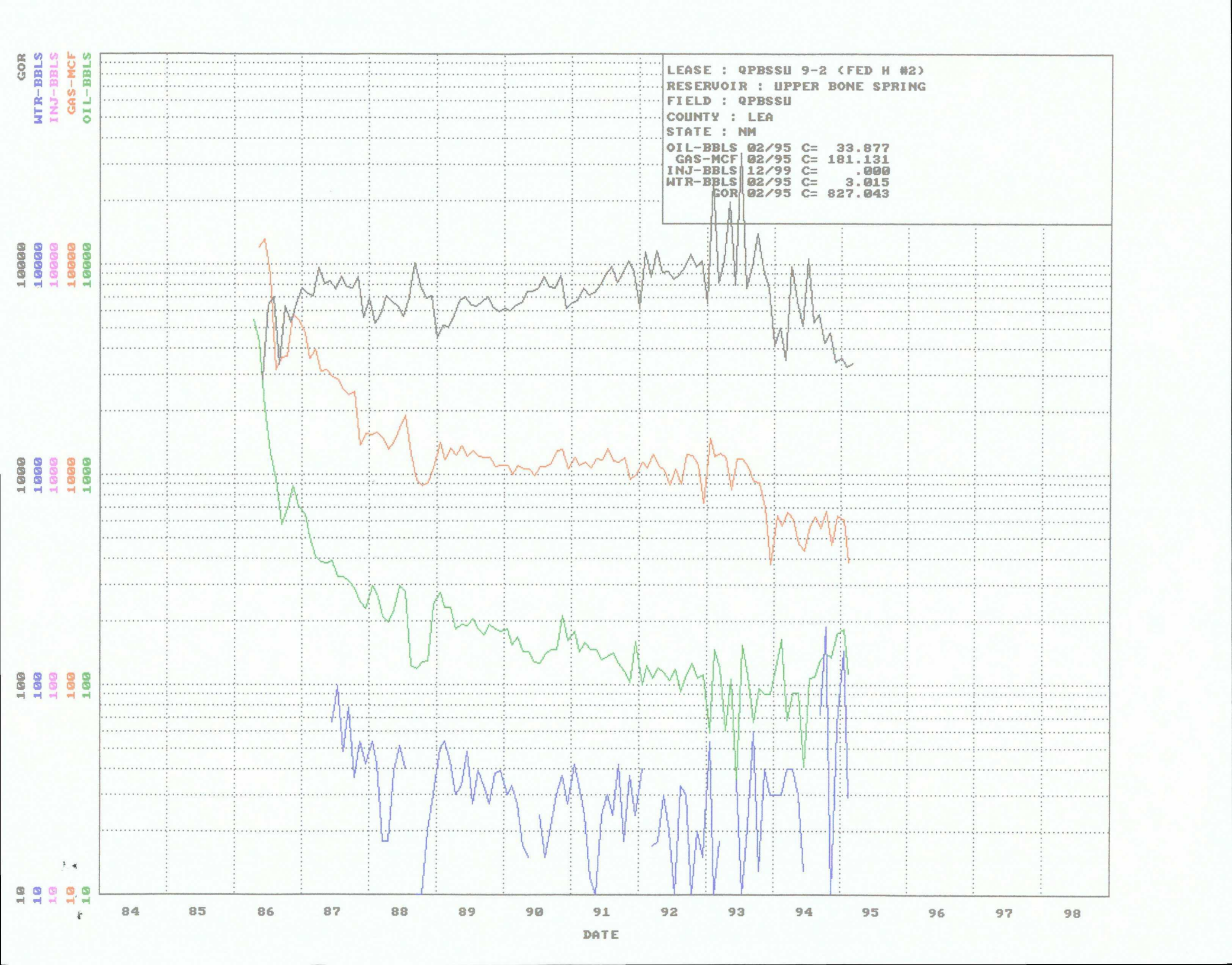
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	50889	163072	10159	0	3204
1/93	531	3389	124	0	6382
2/93	521	3381	137	0	6489
3/93	470	3017	140	0	6419
4/93	459	3112	171	0	6780
5/93	438	2992	143	0	6831
6/93	357	2920	232	0	8179
7/93	404	3094	615	0	7658
8/93	403	3152	216	0	7821
9/93	379	2536	175	0	6691
10/93	354	2453	169	0	6929
11/93	340	2679	170	0	7879
12/93	345	3362	200	0	9745
TOT/93	5001	36087	2492	0	7216
1/94	411	2551	169	0	6207
2/94	305	1911	150	0	6266
3/94	389	2418	210	0	6216
4/94	289	2295	250	0	7941
5/94	282	2087	210	0	7401
6/94	374	1702	115	0	4551
7/94	271	1520	204	0	5609
8/94	327	1286	171	0	3933
9/94	250	991	115	0	3964
10/94	252	1183	111	0	4694
11/94	409	1693	103	0	4139
12/94	500	1635	34	0	3270
TOT/94	4059	21272	1842	0	5241
TOTAL	59949	220431	14493	0	3677


10 100 1000 10000 GOR
10 100 1000 10000 WTR-BBLS
10 100 1000 10000 INJ-BBLS
10 100 1000 10000 GAS-MCF
10 100 1000 10000 OIL-BBLS
84 85 86 87 88 89 90 91 92 93 94 95 96 97 98
DATE
LEASE : QPBSSU 3-6 (FED L #6)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 57.187
GAS-MCF 02/95 C= 238.011
INJ-BBLS 12/99 C= .000
WTR-BBLS 02/95 C= 31.842
GOR 02/95 C= 449.666

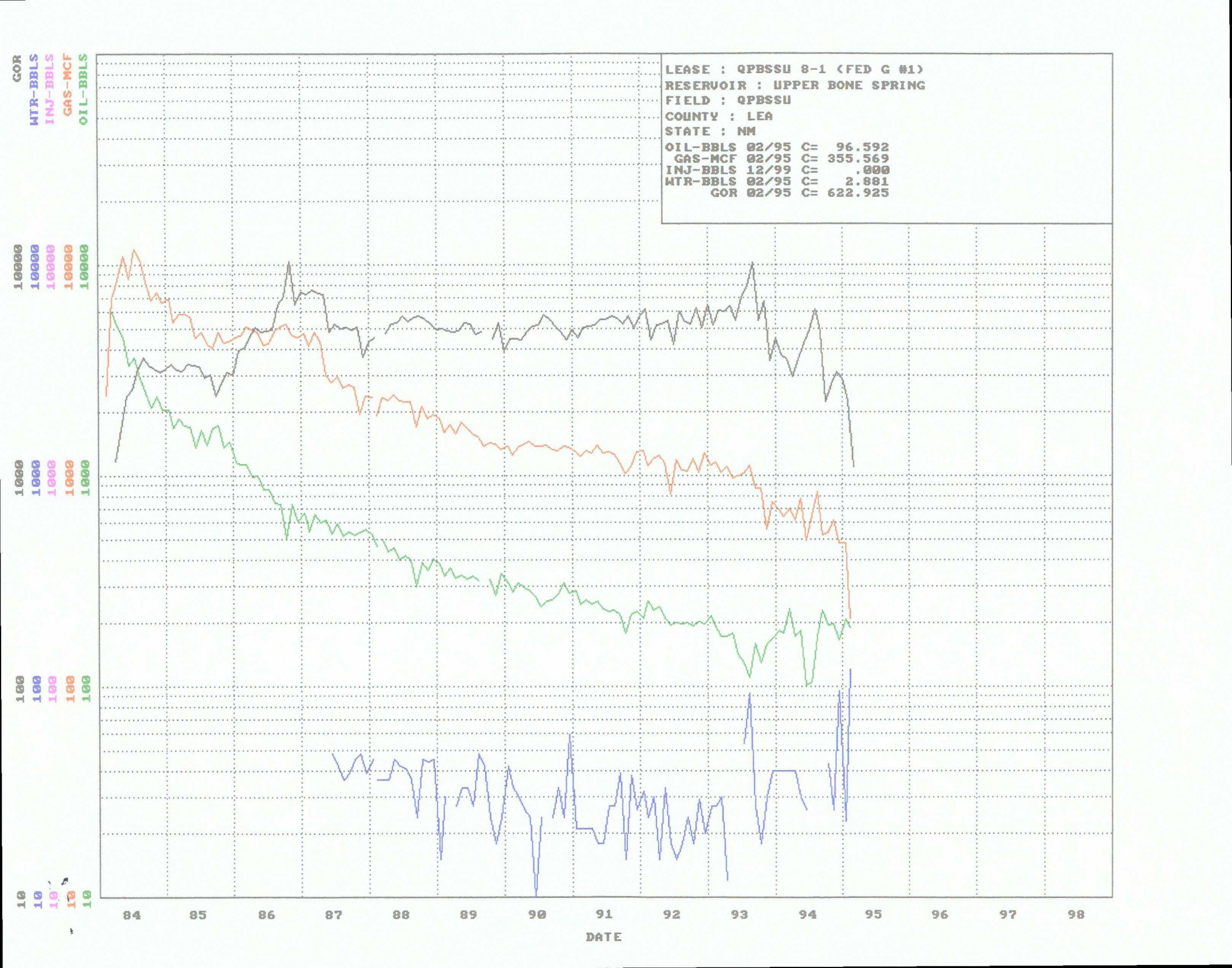
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	51415	199205	11434	0	3874
1/93	489	2184	283	0	4466
2/93	295	2779	264	0	9420
3/93	300	2848	191	0	9493
4/93	264	2344	159	0	8879
5/93	286	2396	150	0	8378
6/93	240	2062	170	0	8592
7/93	273	1990	167	0	7289
8/93	221	2056	153	0	9303
9/93	242	2118	120	0	8752
10/93	189	2058	118	0	10889
11/93	227	1571	120	0	6921
12/93	201	1370	150	0	6816
TOT/93	3227	25776	2045	0	7988
1/94	139	980	3440	0	7050
2/94	38	96	2500	0	2526
3/94	96	695	450	0	7240
4/94	120	879	651	0	7325
5/94	101	626	100	0	6198
6/94	135	764	71	0	5659
7/94	248	985	251	0	3972
8/94	136	553	33	0	4066
9/94	200	1477	348	0	7385
10/94	262	1533	281	0	5851
11/94	261	1387	2322	0	5314
12/94	258	1056	2663	0	4093
TOT/94	1994	11031	13110	0	5532
TOTAL	56636	236012	26589	0	4167


LEASE : QPBSSU 9-2 (FED H #2)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 33.877
GAS-MCF 02/95 C= 181.131
INJ-BBLS 12/99 C= .000
WTR-BBLS 02/95 C= 3.015
GOR 02/95 C= 827.043
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
100000
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

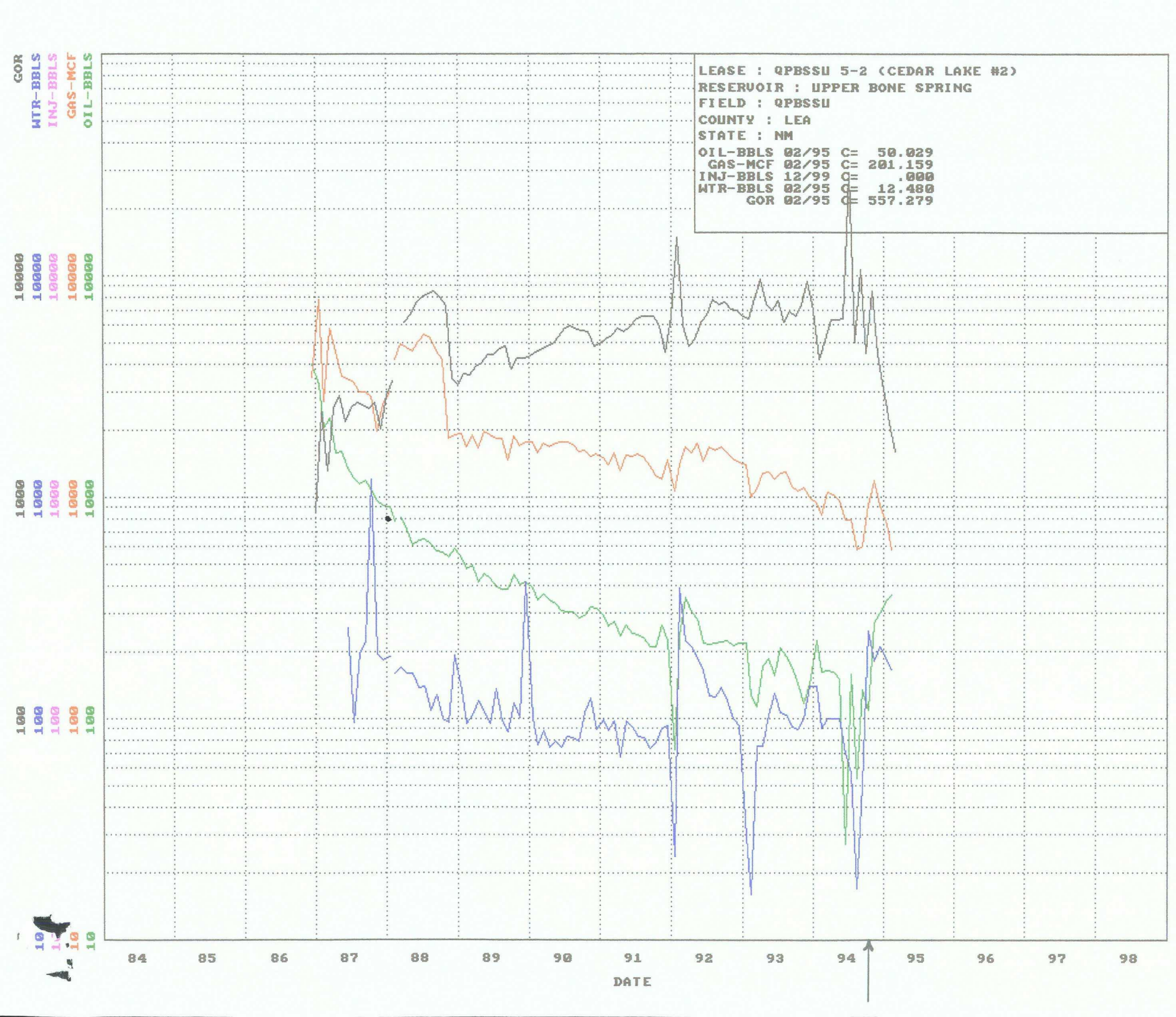
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	31055	160807	2044	0	5178
1/93	59	1495	54	0	25339
2/93	148	1215	6	0	8209
3/93	121	1260	18	0	10413
4/93	61	1208	0	0	19803
5/93	106	847	0	0	7991
6/93	35	1192	35	0	34057
7/93	155	1195	6	0	7710
8/93	112	1093	21	0	9759
9/93	66	926	60	0	14030
10/93	96	914	13	0	9521
11/93	90	693	40	0	7700
12/93	91	374	30	0	4110
TOT/93	1140	12412	283	0	10888
1/94	128	638	30	0	4984
2/94	164	573	30	0	3494
3/94	68	664	40	0	9765
4/94	92	619	40	0	6728
5/94	92	471	30	0	5120
6/94	41	434	13	0	10585
7/94	108	569	0	0	5269
8/94	109	630	0	0	5780
9/94	131	556	72	0	4244
10/94	141	669	188	0	4745
11/94	134	461	6	0	3440
12/94	176	637	65	0	3619
TOT/94	1384	6921	514	0	5001
TOTAL	33579	180140	2841	0	5365


LEASE : QPBSSU 8-1 (FED G #1)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 96.592
GAS-MCF 02/95 C= 355.569
INJ-BBLS 12/99 C= .000
WTR-BBLS 02/95 C= 2.881
GOR 02/95 C= 622.925
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	92133	335731	1989	0	3644
1/93	216	1114	27	0	5157
2/93	191	1167	27	0	6110
3/93	174	1042	30	0	5989
4/93	172	1098	12	0	6384
5/93	179	975	0	0	5447
6/93	142	1006	0	0	7085
7/93	130	1024	54	0	7877
8/93	110	1121	93	0	10191
9/93	160	871	27	0	5444
10/93	130	873	18	0	6715
11/93	159	556	30	0	3497
12/93	168	747	40	0	4446
TOT/93	1931	11594	358	0	6004
1/94	183	685	40	0	3743
2/94	180	640	40	0	3556
3/94	234	693	40	0	2962
4/94	174	619	40	0	3557
5/94	185	782	30	0	4227
6/94	101	494	26	0	4891
7/94	105	650	0	0	6190
8/94	174	838	11	0	4816
9/94	231	522	0	0	2260
10/94	197	536	43	0	2721
11/94	198	616	26	0	3111
12/94	166	481	95	0	2898
TOT/94	2128	7556	391	0	3551
TOTAL	96192	354881	2738	0	3689


LEASE : QPBSSU 5-2 (CEDAR LAKE #2)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 50.029
GAS-MCF 02/95 C= 201.159
INJ-BBLS 12/99 C= .000
WTR-BBLS 02/95 C= 12.480
GOR 02/95 C= 557.279
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	45455	175097	9708	0	3852
1/93	219	1402	29	0	6402
2/93	126	999	16	0	7929
3/93	113	1089	75	0	9637
4/93	174	1288	75	0	7402
5/93	186	1292	104	0	6946
6/93	157	1203	130	0	7662
7/93	209	1287	106	0	6158
8/93	190	1300	104	0	6842
9/93	170	1118	92	0	6576
10/93	143	1064	89	0	7441
11/93	118	1108	100	0	9390
12/93	143	996	140	0	6965
TOT/93	1948	14146	1060	0	7262
1/94	225	936	140	0	4160
2/94	163	833	90	0	5110
3/94	165	1045	100	0	6333
4/94	163	1023	100	0	6276
5/94	151	963	100	0	6377
6/94	27	787	70	0	29148
7/94	159	790	57	0	4969
8/94	54	578	17	0	10704
9/94	135	598	50	0	4430
10/94	109	927	248	0	8505
11/94	271	1187	182	0	4380
12/94	298	918	210	0	3081
TOT/94	1920	10585	1364	0	5513
TOTAL	49323	199828	12132	0	4051


LEASE : BURLESON FEDERAL #3
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 10/94 C= 4.489
GAS-MCF 10/94 C= 5.558
INJ-BBLS 12/99 C= .000
WTR-BBLS 12/99 C= .000
GOR 10/94 C= 64.758
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	4489	5558	0	0	1238
1/94					
2/94					
3/94	0	0	0	0	0
4/94	0	0	0	0	0
5/94	0	0	0	0	0
6/94	0	0	0	0	0
7/94	0	0	0	0	0
8/94	0	0	0	0	0
9/94	0	0	0	0	0
10/94	0	0	0	0	0
11/94					
12/94					
TOT/94	0	0	0	0	0
TOTAL	4489	5558	0	0	1238

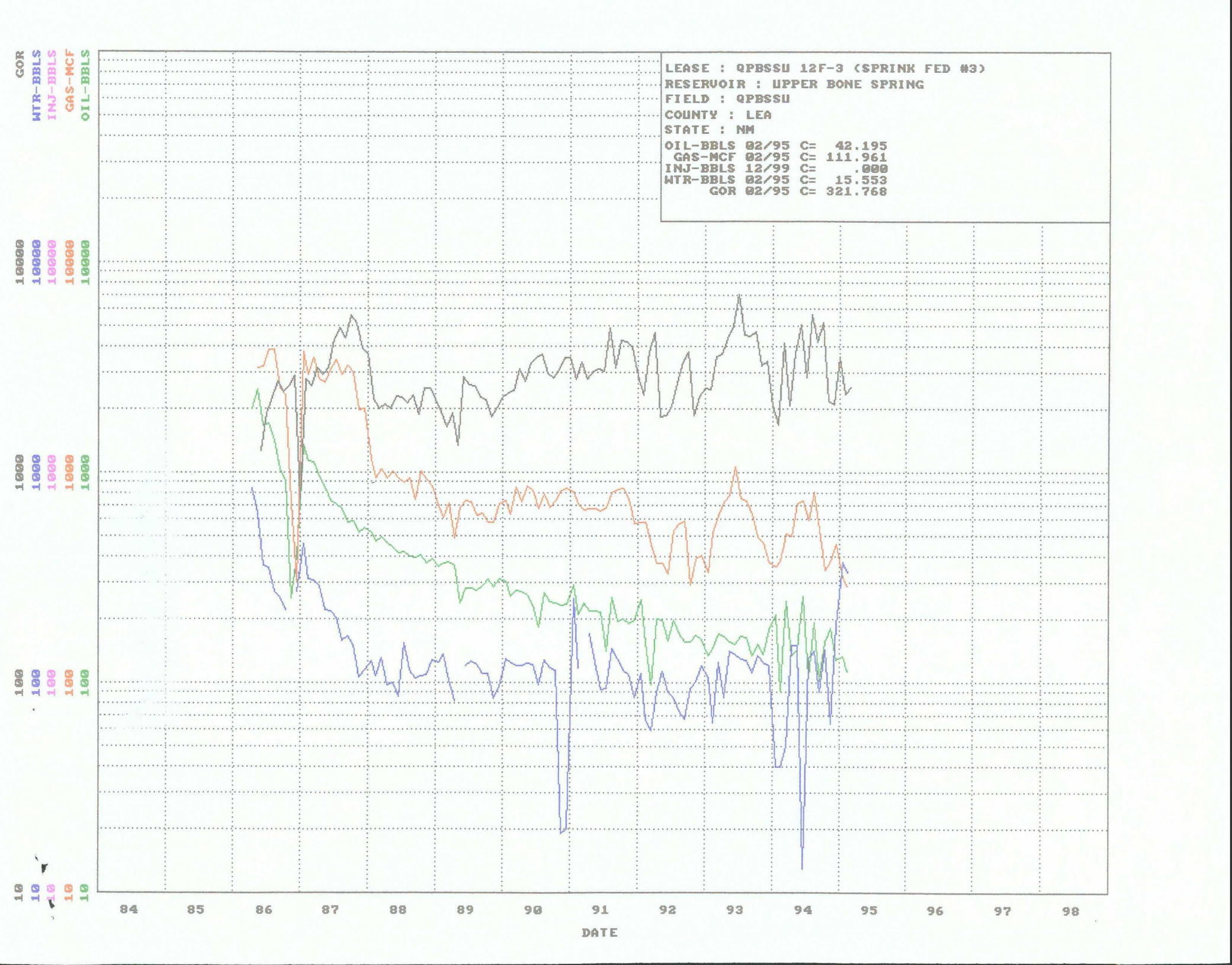

LEASE : SPRINKLE FEDERAL #4
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 10/94 C= 1.201
GAS-MCF 10/94 C= 3.560
INJ-BBLS 12/99 C= .000
WTR-BBLS 12/99 C= .000
GOR 10/94 C= 10.363
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
10000
1000
100
10
1
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	1201	3560	0	0	2964
1/93	0	0	0	0	0
2/93	0	0	0	0	0
3/93	0	0	0	0	0
4/93	0	0	0	0	0
5/93	0	0	0	0	0
6/93	0	0	0	0	0
7/93	0	0	0	0	0
8/93	0	0	0	0	0
9/93	0	0	0	0	0
10/93	0	0	0	0	0
11/93	0	0	0	0	0
12/93	0	0	0	0	0
TOT/93	0	0	0	0	0
1/94	0	0	0	0	0
2/94	0	0	0	0	0
3/94	0	0	0	0	0
4/94	0	0	0	0	0
5/94	0	0	0	0	0
6/94	0	0	0	0	0
7/94	0	0	0	0	0
8/94	0	0	0	0	0
9/94	0	0	0	0	0
10/94	0	0	0	0	0
11/94					
12/94					
TOT/94	0	0	0	0	0
TOTAL	1201	3560	0	0	2964

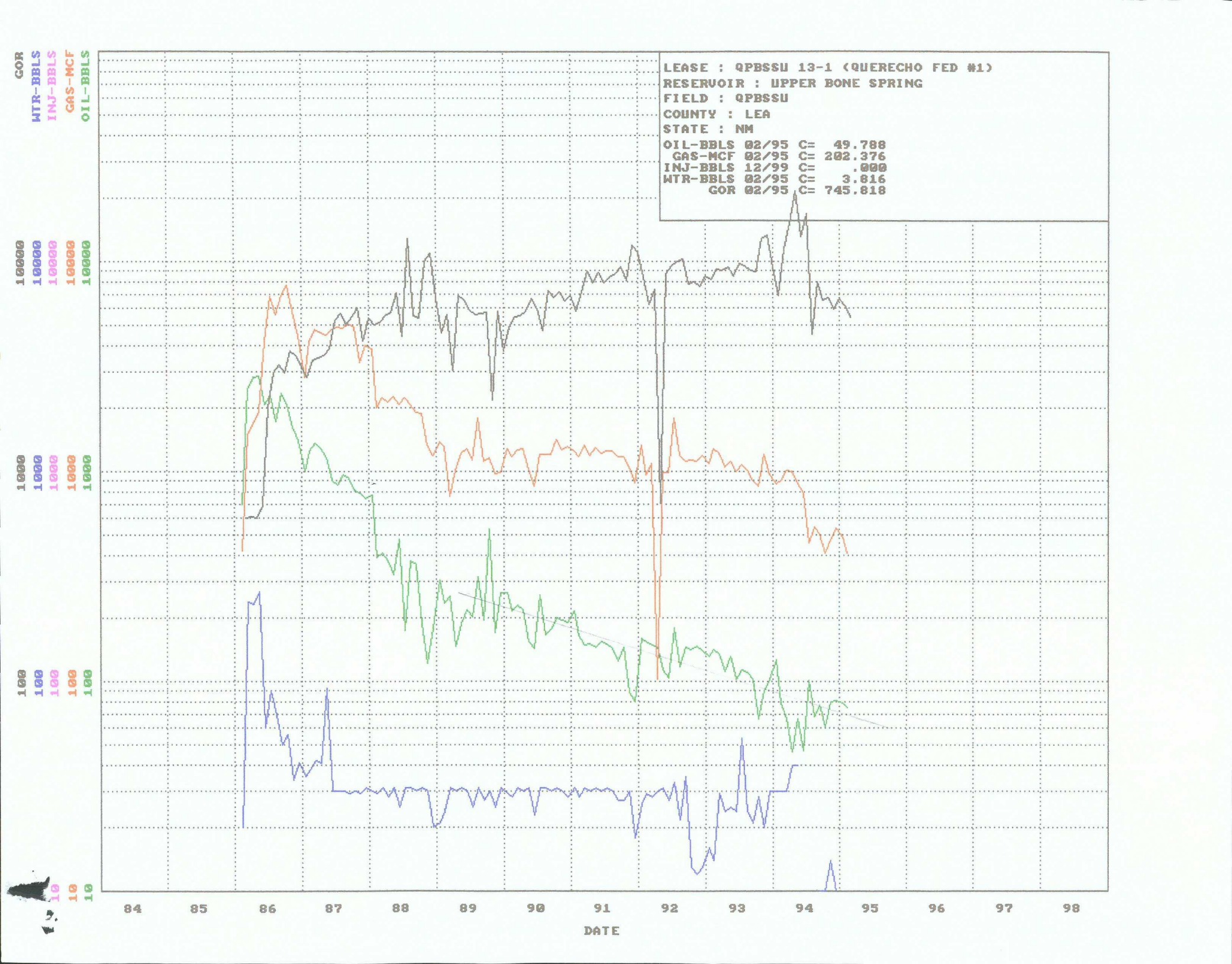
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	17327	96924	8678	0	5594
1/93	185	1480	131	0	8000
2/93	127	1042	109	0	8205
3/93	154	1770	106	0	11494
4/93	134	1814	137	0	13537
5/93	145	1602	90	0	11048
6/93	120	1768	113	0	14733
7/93	113	1569	94	0	13885
8/93	125	1097	77	0	8776
9/93	117	1090	76	0	9316
10/93	104	1084	66	0	10423
11/93	227	693	125	0	3053
12/93	309	1245	375	0	4029
TOT/93	1860	16254	1499	0	8739
1/94	185	1470	120	0	7946
2/94	79	956	505	0	12101
3/94	182	715	475	0	3929
4/94	152	698	331	0	4592
5/94	114	782	230	0	6860
6/94	168	845	114	0	5030
7/94	97	607	148	0	6258
8/94	111	727	194	0	6550
9/94	105	580	128	0	5524
10/94	181	611	89	0	3376
11/94	224	648	51	0	2893
12/94	208	600	39	0	2885
TOT/94	1806	9239	2424	0	5116
TOTAL	20993	122417	12601	0	5831


LEASE : QPBSSU 12F-3 (SPRINK FED #3)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 42.195
GAS-MCF 02/95 C= 111.961
INJ-BBLS 12/99 C= .000
WTR-BBLS 02/95 C= 15.553
GOR 02/95 C= 321.768
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
100000
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

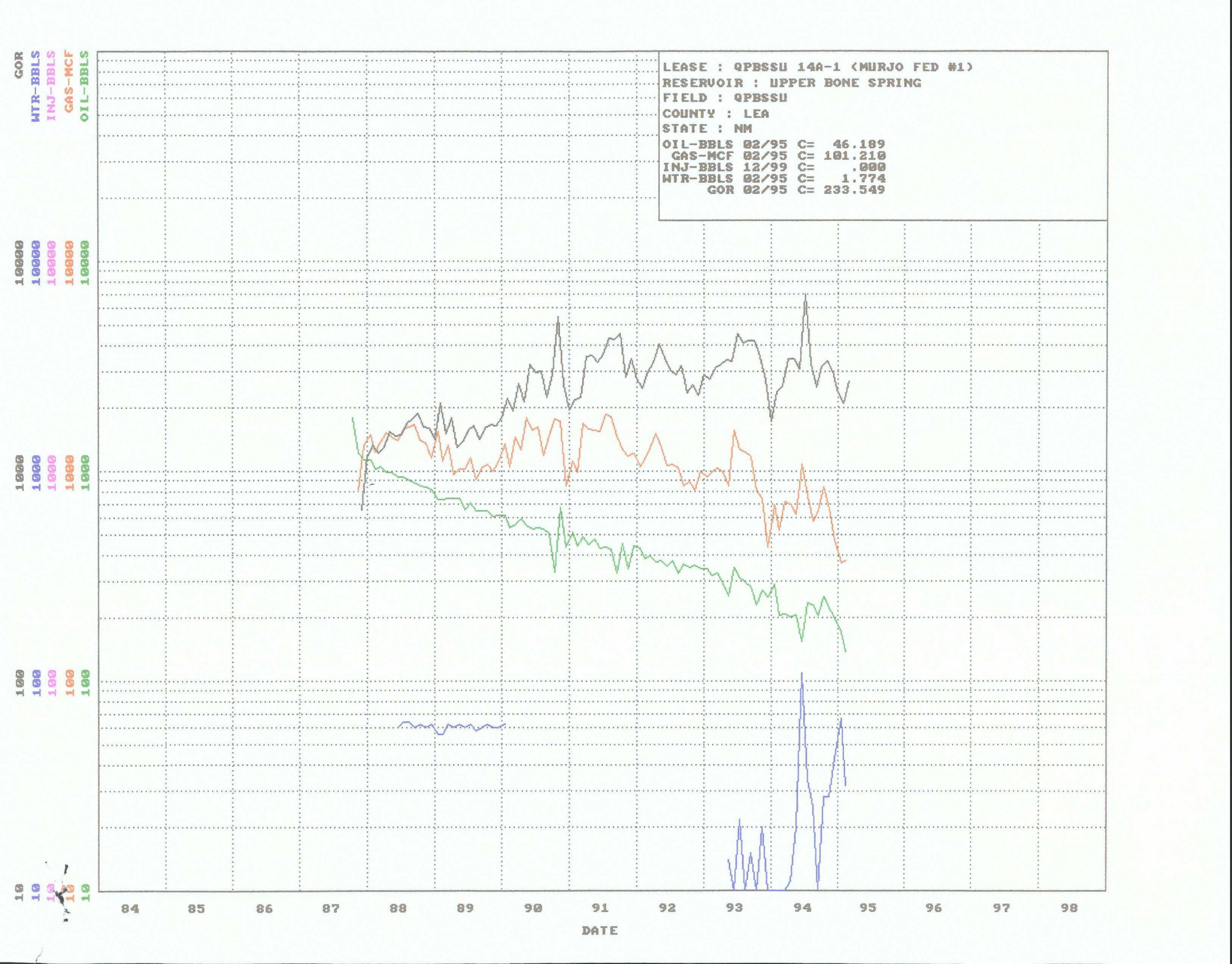
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	38134	97558	12228	0	2558
1/93	135	334	106	0	2474
2/93	146	519	65	0	3555
3/93	171	622	125	0	3637
4/93	166	720	85	0	4337
5/93	157	779	142	0	4962
6/93	152	1067	137	0	7020
7/93	167	752	130	0	4503
8/93	165	735	129	0	4455
9/93	135	629	112	0	4659
10/93	153	490	135	0	3203
11/93	136	463	125	0	3404
12/93	180	374	120	0	2078
TOT/93	1863	7484	1411	0	4017
1/94	211	354	40	0	1678
2/94	92	381	40	0	4141
3/94	245	510	50	0	2082
4/94	134	498	150	0	3716
5/94	143	718	150	0	5021
6/94	258	733	13	0	2841
7/94	106	595	131	0	5613
8/94	194	811	142	0	4180
9/94	103	535	91	0	5194
10/94	157	345	144	0	2197
11/94	181	380	64	0	2099
12/94	128	457	189	0	3570
TOT/94	1952	6317	1204	0	3236
TOTAL	41949	111359	14843	0	2655


LEASE : QPBSSU 13-1 (QUERECHO FED #1)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 49.788
GAS-MCF 02/95 C= 202.376
INJ-BBLS 12/99 C= .000
WTR-BBLS 02/95 C= 3.816
GOR 02/95 C= 745.818
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
100000
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	47397	180329	3295	0	3805
1/93	132	1087	16	0	8235
2/93	141	1287	14	0	9128
3/93	134	1216	29	0	9075
4/93	112	1050	24	0	9375
5/93	132	1125	25	0	8523
6/93	102	997	24	0	9775
7/93	113	1074	54	0	9504
8/93	111	1008	24	0	9081
9/93	102	908	21	0	8902
10/93	66	850	28	0	12879
11/93	91	1212	20	0	13319
12/93	102	960	30	0	9412
TOT/93	1338	12774	309	0	9547
1/94	127	876	30	0	6898
2/94	79	907	30	0	11481
3/94	66	1011	30	0	15318
4/94	46	1000	40	0	21739
5/94	66	870	40	0	13182
6/94	47	792	0	0	16851
7/94	101	455	0	0	4505
8/94	68	541	0	0	7956
9/94	77	505	8	0	6558
10/94	61	410	1	0	6721
11/94	80	472	14	0	5900
12/94	81	539	9	0	6654
TOT/94	899	8378	202	0	9319
TOTAL	49634	201481	3806	0	4059


LEASE : QPBSSU 14A-1 (MURJO FED #1)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 46.189
GAS-MCF 02/95 C= 101.210
INJ-BBLS 12/99 C= .000
WTR-BBLS 02/95 C= 1.774
GOR 02/95 C= 233.549
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

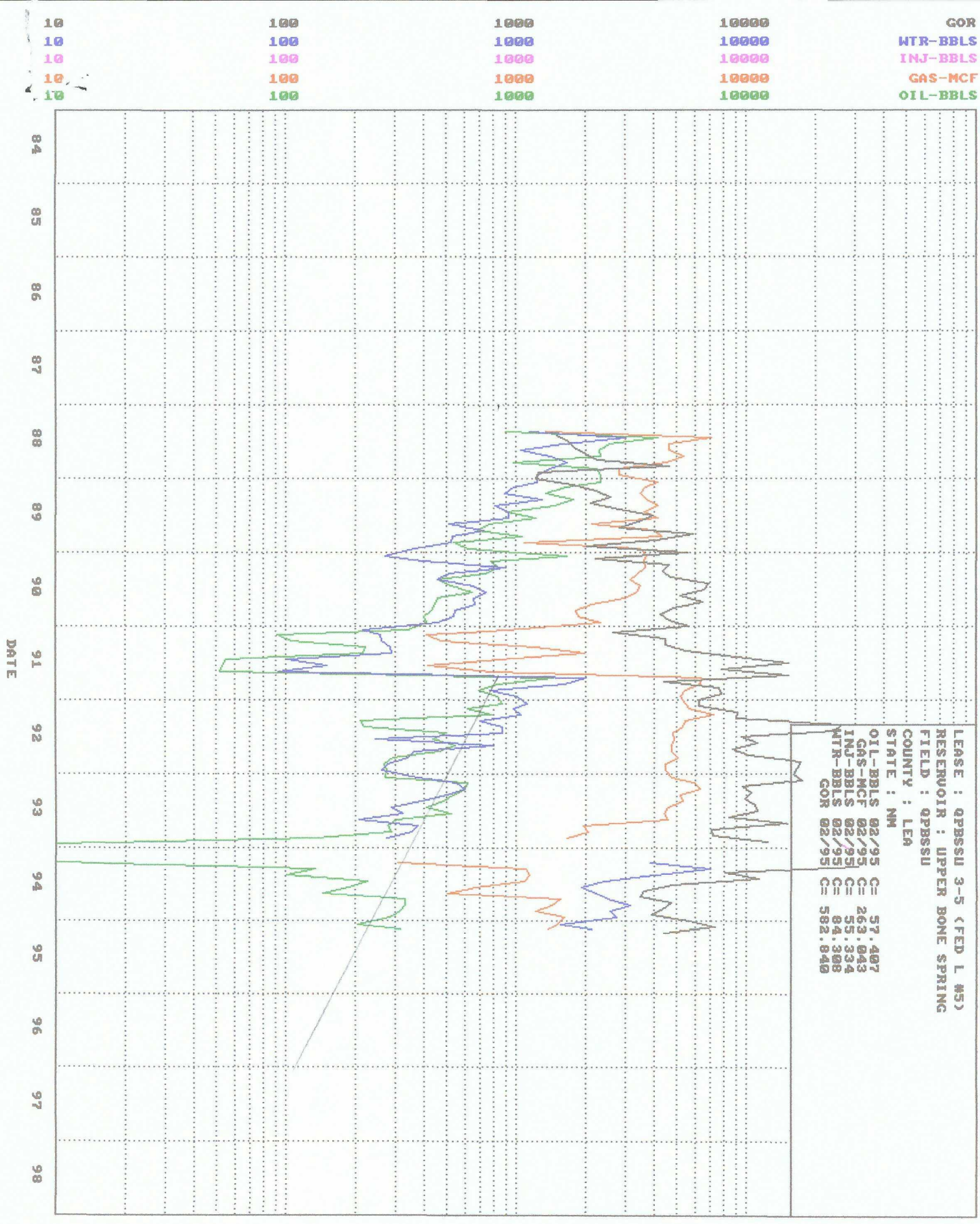
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	39745	80160	1241	0	2017
1/93	344	938	0	0	2727
2/93	320	991	0	0	3097
3/93	325	1043	0	0	3209
4/93	292	987	0	0	3380
5/93	253	846	14	0	3344
6/93	349	1573	9	0	4507
7/93	312	1267	22	0	4061
8/93	295	1232	9	0	4176
9/93	280	1176	15	0	4200
10/93	229	801	6	0	3498
11/93	272	738	20	0	2713
12/93	252	435	10	0	1726
TOT/93	3523	12027	105	0	3414
1/94	289	687	10	0	2377
2/94	207	526	10	0	2541
3/94	209	715	10	0	3421
4/94	203	698	11	0	3438
5/94	205	627	20	0	3059
6/94	154	1074	109	0	6974
7/94	235	759	34	0	3230
8/94	231	579	25	0	2506
9/94	205	647	2	0	3156
10/94	251	841	28	0	3351
11/94	222	664	28	0	2991
12/94	200	471	43	0	2355
TOT/94	2611	8288	330	0	3174
TOTAL	45879	100475	1676	0	2190


LEASE : QPBSSU 2B-2 (FED P #2)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 21.860
GAS-MCF 02/95 C= 79.174
INJ-BBLS 12/99 C= .000
WTR-BBLS 02/95 C= 14.356
GOR 02/95 C= 279.098
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	15937	48548	9874	0	3046
1/93	282	2132	106	0	7560
2/93	283	1980	106	0	6996
3/93	259	1299	214	0	5015
4/93	182	839	177	0	4610
5/93	288	1653	192	0	5740
6/93	238	2256	248	0	9479
7/93	256	1422	258	0	5555
8/93	242	1441	242	0	5955
9/93	249	1118	228	0	4490
10/93	202	1215	208	0	6015
11/93	204	1063	200	0	5211
12/93	181	1370	200	0	7569
TOT/93	2866	17788	2379	0	6207
1/94	317	785	150	0	2476
2/94	179	811	200	0	4531
3/94	123	917	120	0	7455
4/94	150	799	120	0	5327
5/94	155	939	150	0	6058
6/94	306	1009	221	0	3297
7/94	216	1025	216	0	4745
8/94	231	1149	167	0	4974
9/94	250	1044	80	0	4176
10/94	285	908	119	0	3186
11/94	204	834	148	0	4088
12/94	230	888	104	0	3861
TOT/94	2646	11108	1795	0	4198
TOTAL	21449	77444	14048	0	3611


10 100 1000 10000 GOR
10 100 1000 10000 WTR-BBLS
10 100 1000 10000 INJ-BBLS
10 100 1000 10000 GAS-MCF
10 100 1000 10000 OIL-BBLS
84 85 86 87 88 89 90 91 92 93 94 95 96 97 98
DATE
LEASE : QPBSSU 3-5 (FED L #5)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 57.407
GAS-MCF 02/95 C= 263.043
INJ-BBLS 02/95 C= 55.334
WTR-BBLS 02/95 C= 84.308
GOR 02/95 C= 582.840

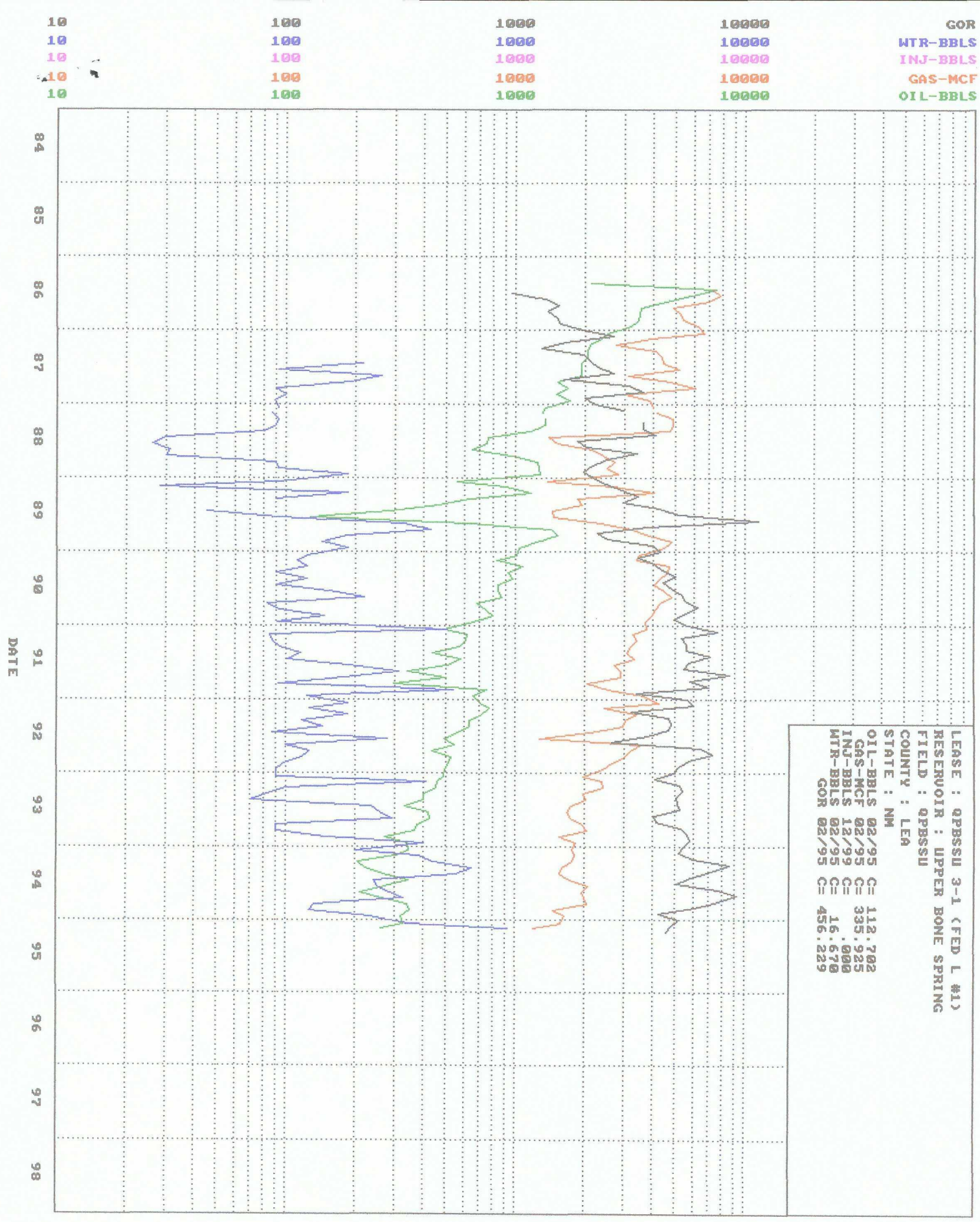
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	50387	202795	43988	0	4025
1/93	271	4731	373	0	17458
2/93	618	5923	552	0	9584
3/93	601	6318	600	0	10512
4/93	528	5194	498	0	9837
5/93	485	5311	390	0	10951
6/93	406	4565	288	0	11244
7/93	524	4403	321	0	8403
8/93	301	4551	209	0	15120
9/93	279	1968	375	0	7054
10/93	287	2057	350	0	7167
11/93	135	1663	275	0	12319
12/93	1	0	0	26086	0
TOT/93	4436	46684	4231	26086	10524
1/94	0	0	0	29248	0
2/94	0	0	0	0	0
3/94	10	306	3816	0	30600
4/94	135	1098	7000	0	8133
5/94	101	1149	4012	0	11376
6/94	228	1095	2427	0	4803
7/94	188	675	1940	0	3590
8/94	146	505	2252	0	3459
9/94	330	1566	2513	0	4745
10/94	329	1435	3129	0	4362
11/94	314	1219	2560	0	3882
12/94	284	1626	2756	0	5725
TOT/94	2065	10674	32405	29248	5169
TOTAL	56888	260153	80624	55334	4573


LEASE : QPBSSU 3-3 (FED L #3)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 101.041
GAS-MCF 02/95 C= 347.499
INJ-BBLS 12/99 C= .000
WTR-BBLS 02/95 C= 23.059
GOR 02/95 C= 569.143
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

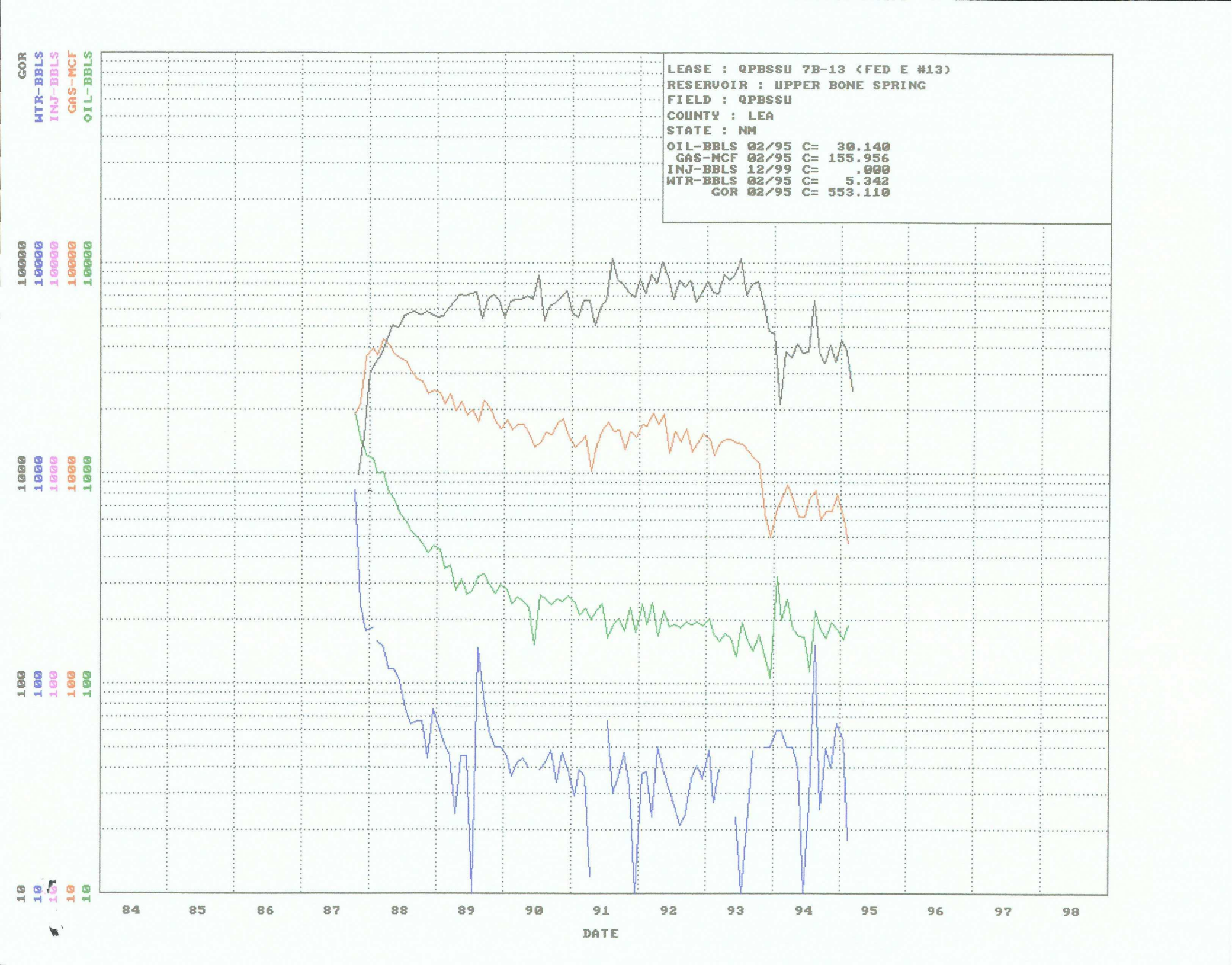
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	95105	297348	17585	0	3127
1/93	434	3555	200	0	8191
2/93	403	2778	360	0	6893
3/93	225	3064	190	0	13618
4/93	198	2521	157	0	12732
5/93	220	2578	150	0	11718
6/93	185	2218	131	0	11989
7/93	189	2139	115	0	11317
8/93	221	2211	153	0	10005
9/93	205	2266	157	0	11054
10/93	232	2202	150	0	9491
11/93	181	1616	150	0	8928
12/93	183	1867	200	0	10202
TOT/93	2876	29015	2113	0	10089
1/94	317	1975	200	0	6230
2/94	127	1503	350	0	11835
3/94	204	1784	180	0	8745
4/94	209	1596	150	0	7636
5/94	179	1566	120	0	8749
6/94	202	1383	207	0	6847
7/94	238	1122	151	0	4714
8/94	243	959	362	0	3947
9/94	225	1712	330	0	7609
10/94	199	1717	319	0	8628
11/94	220	1362	193	0	6191
12/94	225	1551	272	0	6893
TOT/94	2588	18230	2834	0	7044
TOTAL	100569	344593	22532	0	3426


10 100 1000 10000 GOR
10 100 1000 10000 WTR-BBLS
10 100 1000 10000 INJ-BBLS
10 100 1000 10000 GAS-MCF
10 100 1000 10000 OIL-BBLS
84 85 86 87 88 89 90 91 92 93 94 95 96 97 98
DATE
LEASE : QPBSSU 3-1 (FED L #1)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 112.702
GAS-MCF 02/95 C= 335.925
INJ-BBLS 12/99 C= .000
WTR-BBLS 02/95 C= 16.670
GOR 02/95 C= 456.229

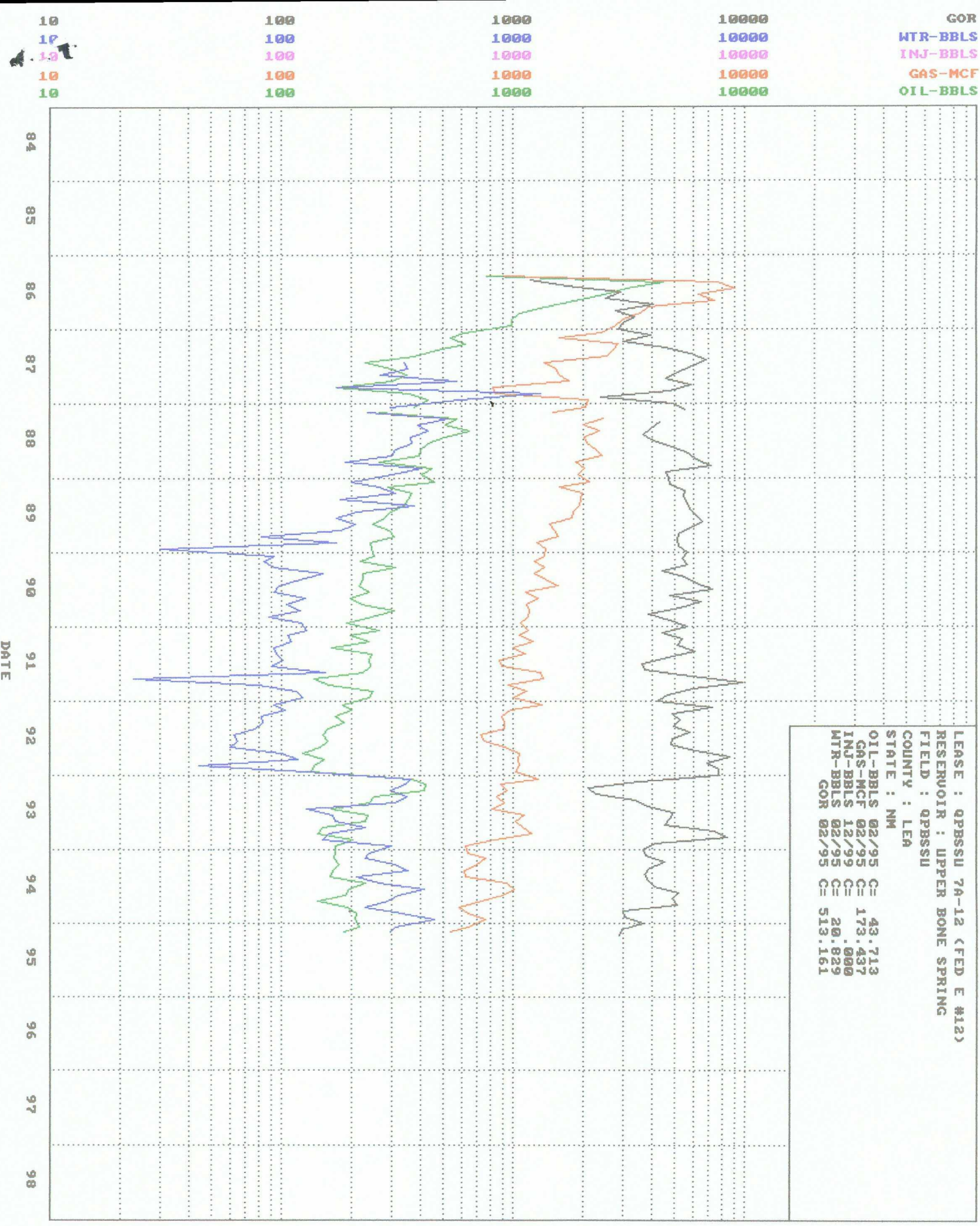
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	103974	288221	9311	0	2772
1/93	488	1987	90	0	4072
2/93	457	2385	408	0	5219
3/93	451	2413	100	0	5350
4/93	396	1987	83	0	5018
5/93	397	2031	70	0	5116
6/93	332	1748	235	0	5265
7/93	419	1687	256	0	4026
8/93	422	1743	293	0	4130
9/93	373	1968	90	0	5276
10/93	366	2056	90	0	5617
11/93	272	1571	150	0	5776
12/93	338	1842	400	0	5450
TOT/93	4711	23418	2265	0	4971
1/94	342	1766	200	0	5164
2/94	302	1814	380	0	6007
3/94	206	1784	440	0	8660
4/94	223	1596	650	0	7157
5/94	266	1566	550	0	5887
6/94	343	1740	242	0	5073
7/94	271	2074	251	0	7653
8/94	211	1970	284	0	9336
9/94	261	2018	328	0	7732
10/94	338	2057	133	0	6086
11/94	347	1473	126	0	4245
12/94	319	1652	234	0	5179
TOT/94	3429	21510	3818	0	6273
TOTAL	112114	333149	15394	0	2972


LEASE : QPBSSU 7B-13 (FED E #13)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 30.140
GAS-MCF 02/95 C= 155.956
INJ-BBLS 12/99 C= .000
WTR-BBLS 02/95 C= 5.342
GOR 02/95 C= 553.110
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

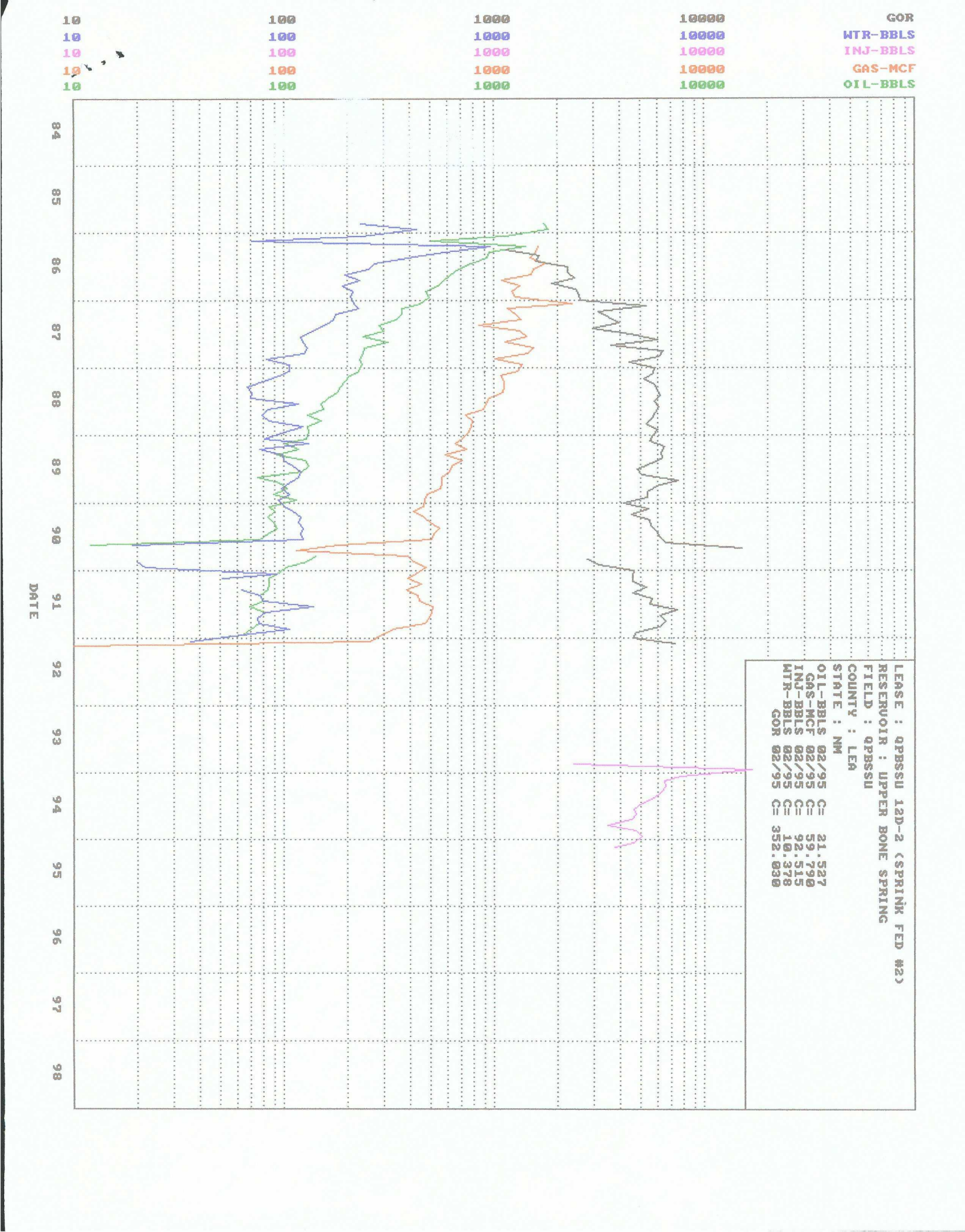
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	25522	131735	4328	0	5162
1/93	203	1460	48	0	7192
2/93	170	1221	27	0	7182
3/93	159	1396	39	0	8780
4/93	174	1449	0	0	8328
5/93	164	1447	0	0	8823
6/93	134	1400	23	0	10448
7/93	195	1383	9	0	7092
8/93	161	1275	21	0	7919
9/93	144	1186	48	0	8236
10/93	171	1121	0	0	6556
11/93	136	645	50	0	4743
12/93	107	497	50	0	4645
TOT/93	1918	14480	315	0	7550
1/94	322	685	60	0	2127
2/94	201	764	60	0	3801
3/94	250	887	50	0	3548
4/94	181	749	50	0	4138
5/94	168	627	40	0	3732
6/94	166	625	8	0	3765
7/94	115	766	27	0	6661
8/94	222	832	153	0	3748
9/94	182	605	25	0	3324
10/94	164	667	49	0	4067
11/94	197	667	40	0	3386
12/94	182	788	65	0	4330
TOT/94	2350	8662	627	0	3686
TOTAL	29790	154877	5270	0	5199


10
100
1000
10000
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE
LEASE : QPBSSU 7A-12 (FED E #12)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 43.713
GAS-MCF 02/95 C= 173.437
INJ-BBLS 12/99 C= .000
WTR-BBLS 02/95 C= 20.829
GOR 02/95 C= 513.161

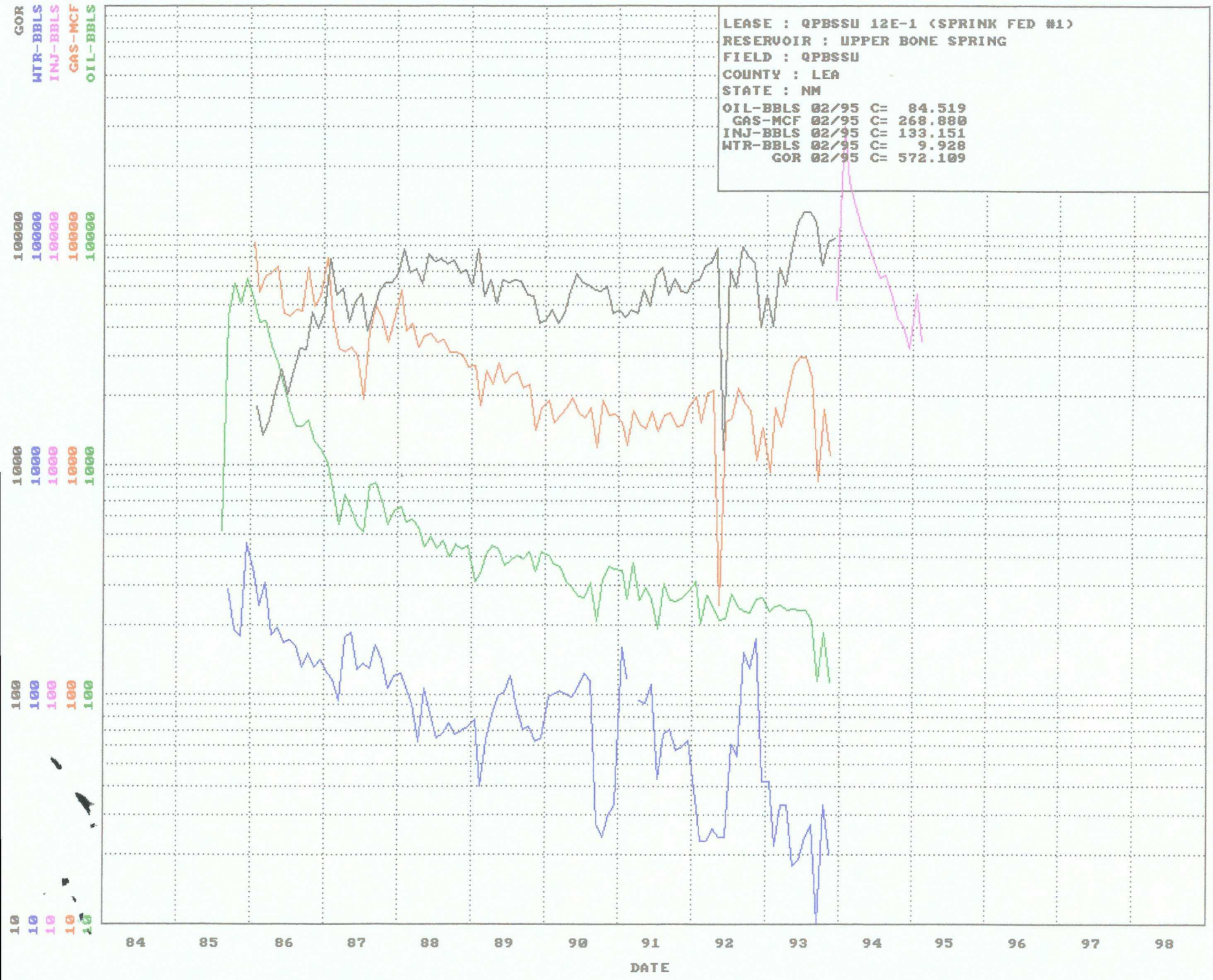
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	38111	151756	13616	0	3982
1/93	366	1285	362	0	3511
2/93	417	878	342	0	2106
3/93	411	938	297	0	2282
4/93	252	849	348	0	3369
5/93	238	917	310	0	3853
6/93	164	810	129	0	4939
7/93	236	1116	166	0	4729
8/93	229	1031	171	0	4502
9/93	151	1107	230	0	7331
10/93	143	1202	160	0	8406
11/93	204	830	150	0	4069
12/93	171	623	300	0	3643
TOT/93	2982	11586	2965	0	3885
1/94	170	638	240	0	3753
2/94	169	764	230	0	4521
3/94	178	693	310	0	3893
4/94	167	617	350	0	3695
5/94	163	627	210	0	3847
6/94	230	938	264	0	4078
7/94	196	1016	415	0	5184
8/94	188	909	320	0	4835
9/94	143	731	288	0	5112
10/94	194	583	231	0	3005
11/94	211	636	331	0	3014
12/94	209	765	454	0	3660
TOT/94	2218	8917	3643	0	4020
TOTAL	43311	172259	20224	0	3977


10 100 1000 10000 GOR
10 100 1000 10000 WTR-BBLS
10 100 1000 10000 INJ-BBLS
10 100 1000 10000 GAS-MCF
10 100 1000 10000 OIL-BBLS
84 85 86 87 88 89 90 91 92 93 94 95 96 97 98
DATE
LEASE : QPBSSU 12D-2 (SPRINK FED #2)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 21.527
GAS-MCF 02/95 C= 59.790
INJ-BBLS 02/95 C= 92.515
WTR-BBLS 02/95 C= 10.378
GOR 02/95 C= 352.030

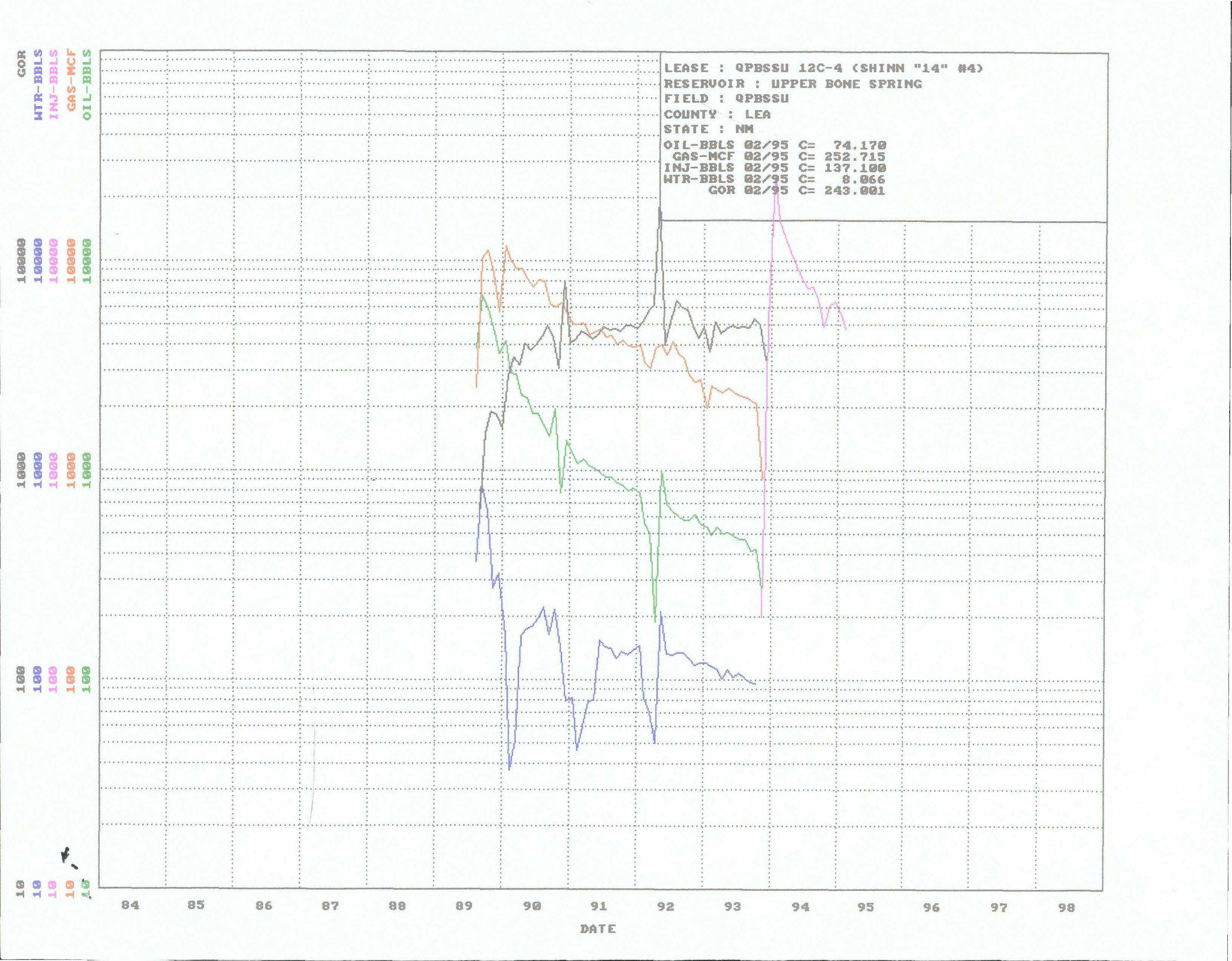
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	21527	59790	10378	0	2777
1/93	0	0	0	0	0
2/93	0	0	0	0	0
3/93	0	0	0	0	0
4/93	0	0	0	0	0
5/93	0	0	0	0	0
6/93	0	0	0	0	0
7/93	0	0	0	0	0
8/93	0	0	0	0	0
9/93	0	0	0	0	0
10/93	0	0	0	0	0
11/93	0	0	0	2377	0
12/93	0	0	0	16874	0
TOT/93	0	0	0	19251	0
1/94	0	0	0	7717	0
2/94	0	0	0	6446	0
3/94	0	0	0	6590	0
4/94	0	0	0	6264	0
5/94	0	0	0	5758	0
6/94	0	0	0	5039	0
7/94	0	0	0	4612	0
8/94	0	0	0	4768	0
9/94	0	0	0	4495	0
10/94	0	0	0	3460	0
11/94	0	0	0	4756	0
12/94	0	0	0	5024	0
TOT/94	0	0	0	64929	0
TOTAL	21527	59790	10378	84180	2777


LEASE : QPBSSU 12E-1 (SPRINK FED #1)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 84.519
GAS-MCF 02/95 C= 268.880
INJ-BBLS 02/95 C= 133.151
WTR-BBLS 02/95 C= 9.928
GOR 02/95 C= 572.109
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

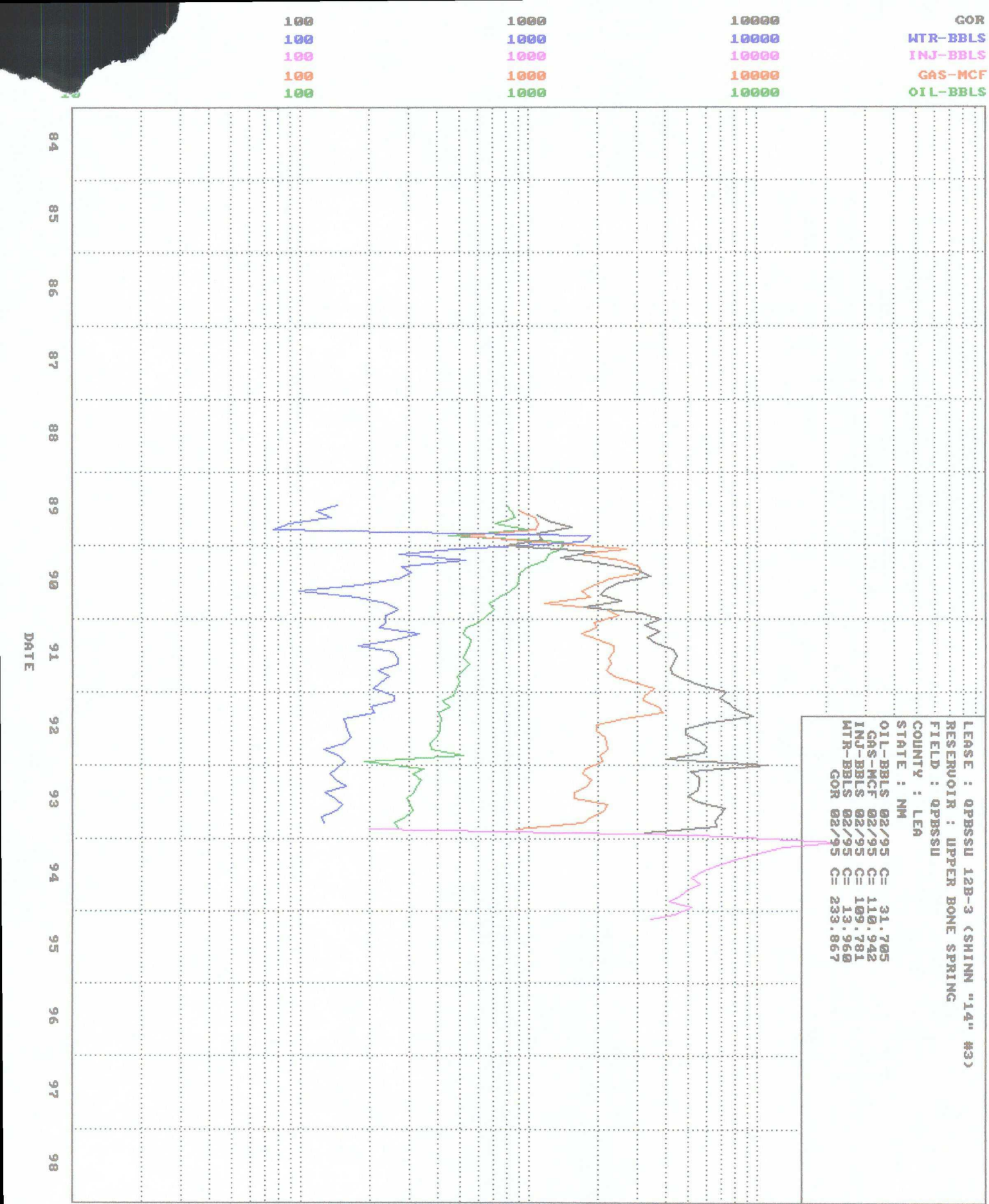
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	82240	247927	9648	0	3015
1/93	229	923	42	0	4031
2/93	243	1769	22	0	7280
3/93	244	1476	33	0	6049
4/93	234	2033	33	0	8688
5/93	236	2693	18	0	11411
6/93	233	2954	19	0	12678
7/93	234	2967	24	0	12679
8/93	211	2426	27	0	11498
9/93	115	848	9	0	7374
10/93	187	1756	33	0	9390
11/93	113	1108	20	0	9805
12/93	0	0	0	5212	0
TOT/93	2279	20953	280	5212	9194
1/94	0	0	0	30085	0
2/94	0	0	0	16987	0
3/94	0	0	0	13439	0
4/94	0	0	0	10841	0
5/94	0	0	0	9334	0
6/94	0	0	0	7696	0
7/94	0	0	0	6580	0
8/94	0	0	0	6743	0
9/94	0	0	0	5598	0
10/94	0	0	0	4344	0
11/94	0	0	0	4052	0
12/94	0	0	0	3209	0
TOT/94	0	0	0	118908	0
TOTAL	84519	268880	9928	124120	3181


LEASE : QPBSSU 12C-4 (SHINN "14" #4)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 74.170
GAS-MCF 02/95 C= 252.715
INJ-BBLS 02/95 C= 137.100
WTR-BBLS 02/95 C= 8.066
GOR 02/95 C= 243.001
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
100000
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

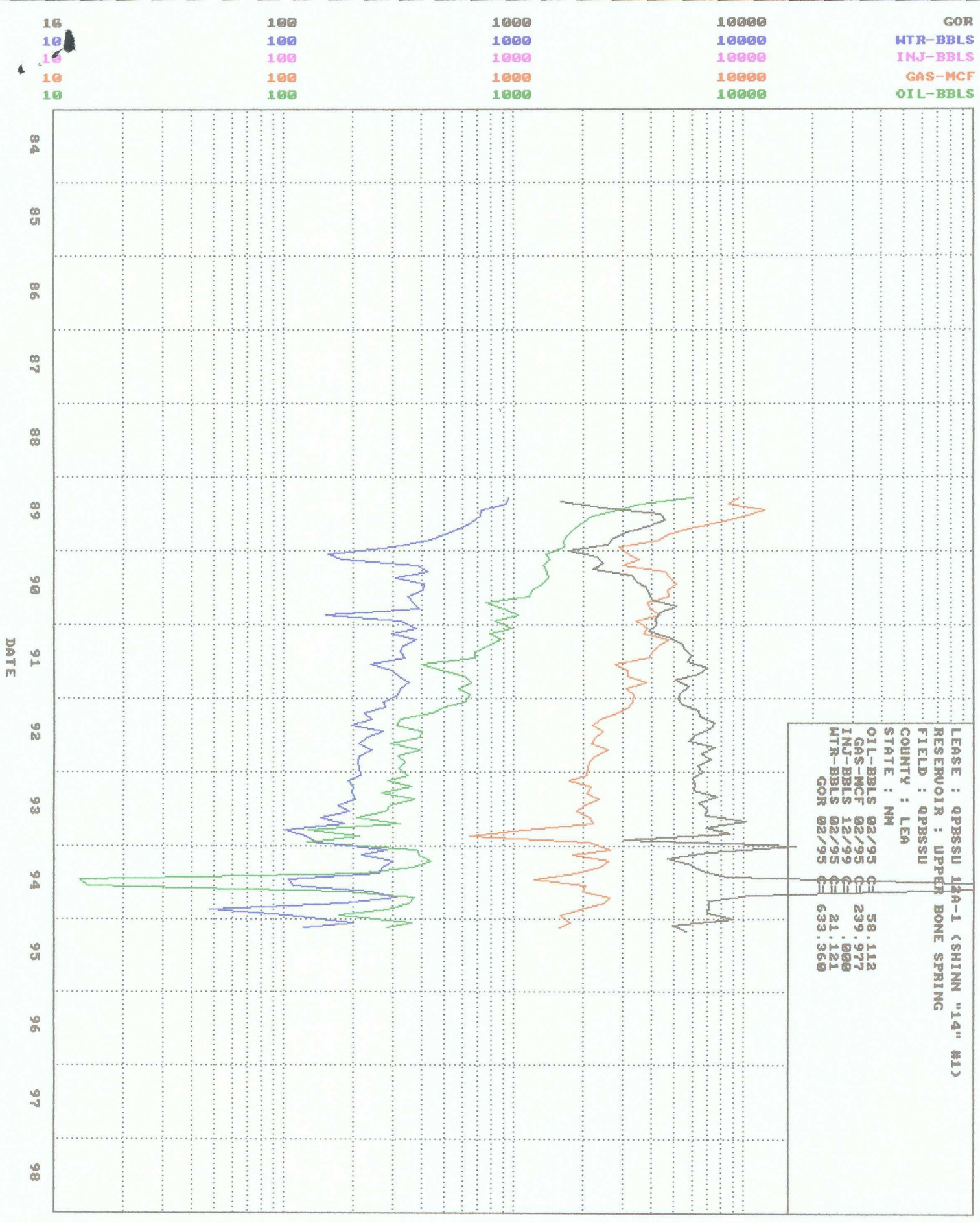
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	69074	228896	6998	0	3314
1/93	535	1984	120	0	3708
2/93	495	2530	116	0	5111
3/93	540	2432	113	0	4504
4/93	499	2353	101	0	4715
5/93	504	2477	112	0	4915
6/93	488	2355	102	0	4826
7/93	466	2274	108	0	4880
8/93	470	2243	102	0	4772
9/93	411	2176	98	0	5294
10/93	416	2073	96	0	4983
11/93	272	922	0	200	3390
12/93	0	0	0	5090	0
TOT/93	5096	23819	1068	5290	4674
1/94	0	0	0	25324	0
2/94	0	0	0	15557	0
3/94	0	0	0	13075	0
4/94	0	0	0	11117	0
5/94	0	0	0	9557	0
6/94	0	0	0	8159	0
7/94	0	0	0	7379	0
8/94	0	0	0	7480	0
9/94	0	0	0	6556	0
10/94	0	0	0	4880	0
11/94	0	0	0	6106	0
12/94	0	0	0	6377	0
TOT/94	0	0	0	121567	0
TOTAL	74170	252715	8066	126857	3407


100 1000 10000 GOR
100 1000 10000 WTR-BBLS
100 1000 10000 INJ-BBLS
100 1000 10000 GAS-MCF
100 1000 10000 OIL-BBLS
84 85 86 87 88 89 90 91 92 93 94 95 96 97 98
DATE
LEASE : QPBSSU 12B-3 (SHINN "14" #3)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 31.705
GAS-MCF 02/95 C= 110.942
INJ-BBLS 02/95 C= 109.781
WTR-BBLS 02/95 C= 13.960
GOR 02/95 C= 233.867

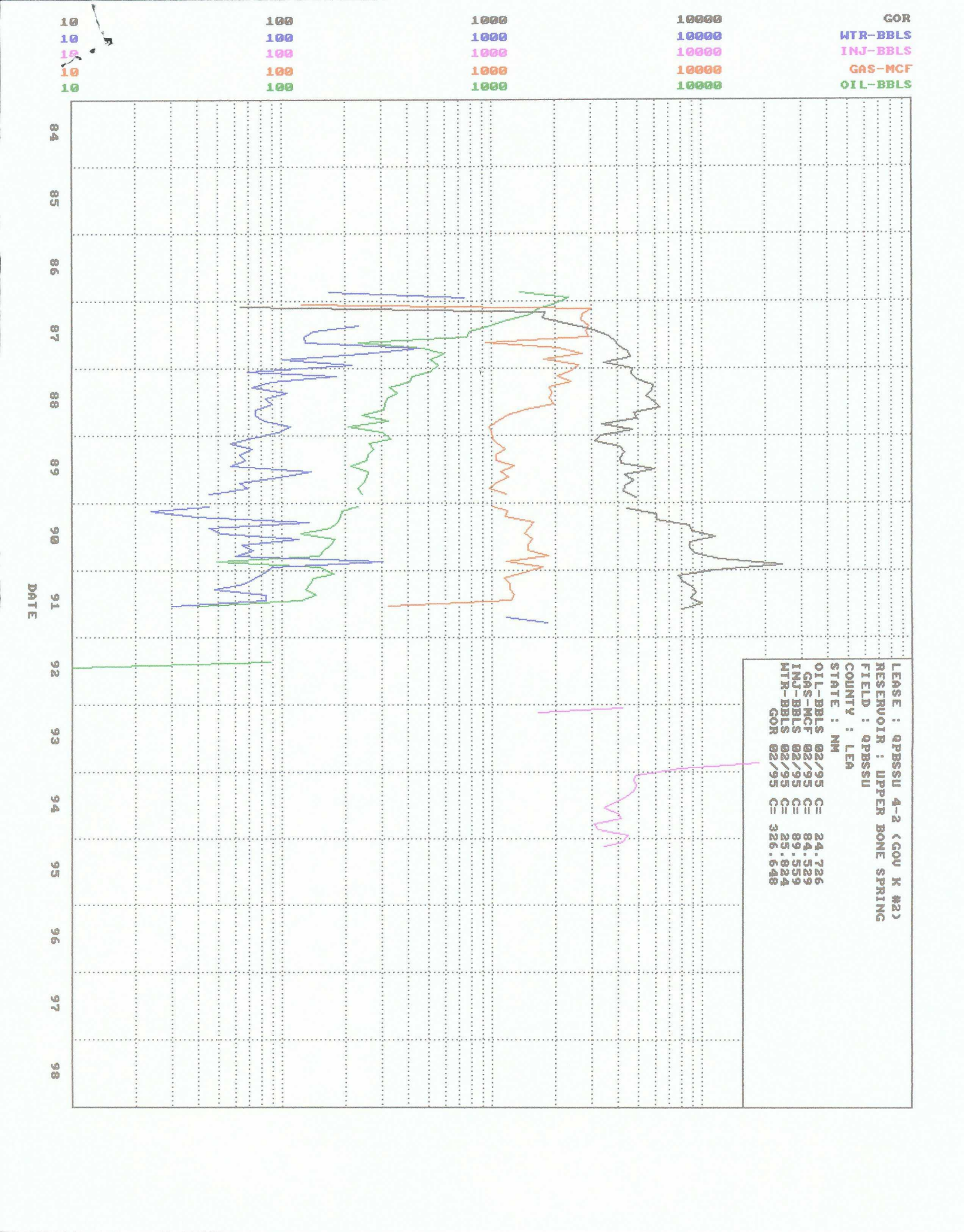
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	28345	91759	12560	0	3237
1/93	348	1780	144	0	5115
2/93	311	1723	135	0	5540
3/93	340	1884	144	0	5541
4/93	324	1792	159	0	5531
5/93	315	1576	129	0	5003
6/93	290	1586	142	0	5469
7/93	303	2206	152	0	7281
8/93	310	2143	144	0	6913
9/93	288	1890	124	0	6563
10/93	259	1725	127	0	6660
11/93	272	878	0	200	3228
12/93	0	0	0	5470	0
TOT/93	3360	19183	1400	5670	5709
1/94	0	0	0	22667	0
2/94	0	0	0	13172	0
3/94	0	0	0	10128	0
4/94	0	0	0	8049	0
5/94	0	0	0	6739	0
6/94	0	0	0	5743	0
7/94	0	0	0	5180	0
8/94	0	0	0	5638	0
9/94	0	0	0	5038	0
10/94	0	0	0	4636	0
11/94	0	0	0	4128	0
12/94	0	0	0	5190	0
TOT/94	0	0	0	96308	0
TOTAL	31705	110942	13960	101978	3499


16 100 1000 10000 GOR
10 100 1000 10000 WTR-BBLS
10 100 1000 10000 INJ-BBLS
10 100 1000 10000 GAS-MCF
10 100 1000 10000 OIL-BBLS
84 85 86 87 88 89 90 91 92 93 94 95 96 97 98
DATE
LEASE : QPBSSU 120-1 (SHINN "14" #1)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 <= 58.112
GAS-MCF 02/95 <= 239.977
INJ-BBLS 12/99 <= .000
WTR-BBLS 02/95 <= 21.121
GOR 02/95 <= 633.360

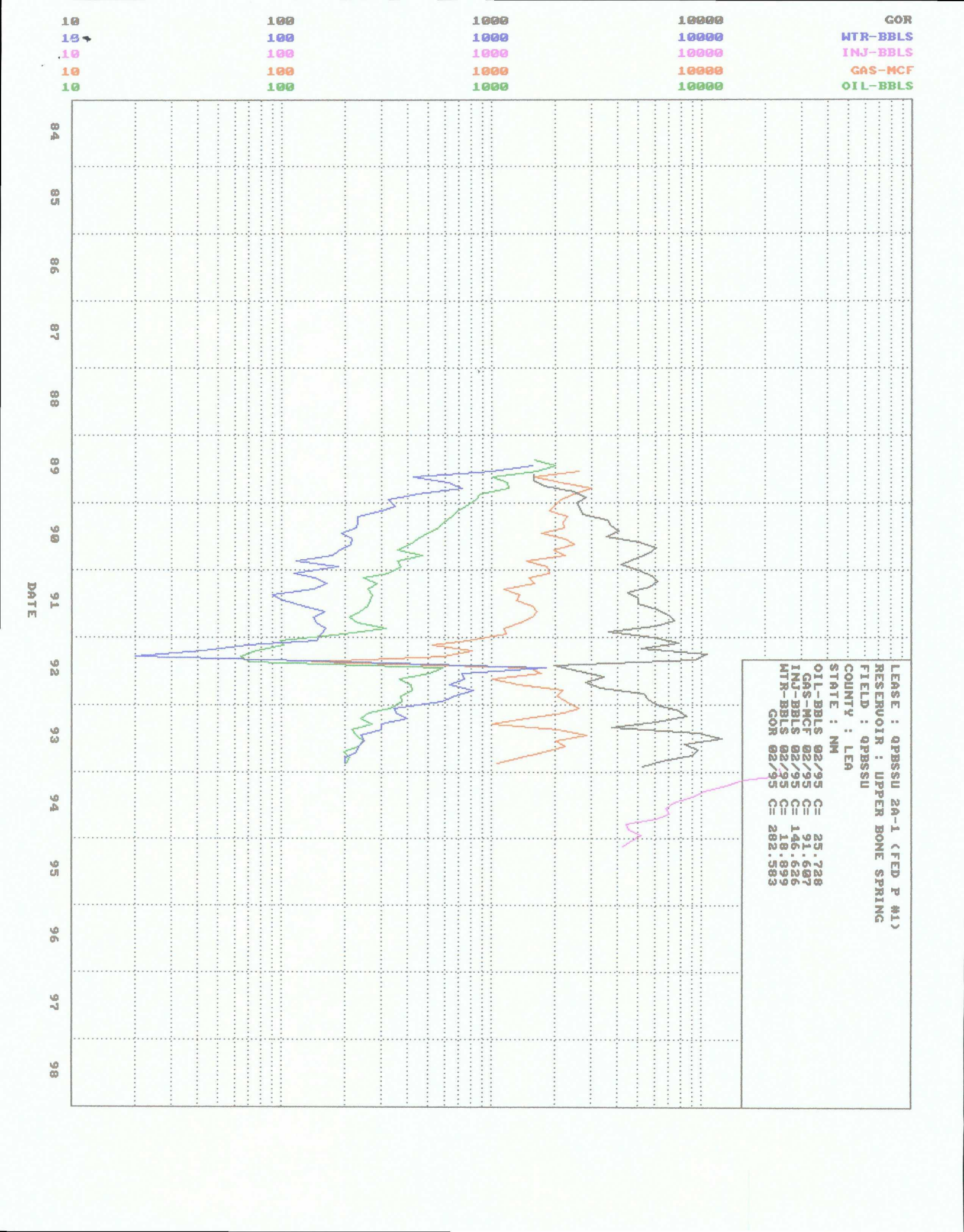
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	51076	188634	16284	0	3693
1/93	349	2087	217	0	5980
2/93	284	1749	190	0	6158
3/93	362	2192	202	0	6055
4/93	269	2075	199	0	7714
5/93	370	2351	206	0	6354
6/93	291	2032	174	0	6983
7/93	279	1892	193	0	6781
8/93	209	2154	146	0	10306
9/93	323	2230	185	0	6904
10/93	128	1118	103	0	8734
11/93	214	645	125	0	3014
12/93	127	2134	140	0	16803
TOT/93	3205	22659	2080	0	7070
1/94	377	2648	280	0	7024
2/94	389	1814	220	0	4663
3/94	438	2602	300	0	5941
4/94	367	2394	270	0	6523
5/94	221	1880	260	0	8507
6/94	13	1237	105	0	95154
7/94	14	2062	111	0	147286
8/94	189	2018	242	0	10677
9/94	370	2625	311	0	7095
10/94	350	2470	182	0	7057
11/94	283	1962	48	0	6933
12/94	176	1603	104	0	9108
TOT/94	3187	25315	2433	0	7943
TOTAL	57468	236608	20797	0	4117


10 100 1000 10000 GOR
10 100 1000 10000 WTR-BBLS
10 100 1000 10000 INJ-BBLS
10 100 1000 10000 GAS-MCF
10 100 1000 10000 OIL-BBLS
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE
LEASE : QPBSSU 4-2 (GOV K #2)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 24.726
GAS-MCF 02/95 C= 84.529
INJ-BBLS 02/95 C= 89.559
WTR-BBLS 02/95 C= 25.824
GOR 02/95 C= 326.648

PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	24726	84529	25824	0	3419
1/93	0	0	0	4194	0
2/93	0	0	0	1672	0
3/93	0	0	0	0	0
4/93	0	0	0	0	0
5/93	0	0	0	0	0
6/93	0	0	0	0	0
7/93	0	0	0	0	0
8/93	0	0	0	0	0
9/93	0	0	0	0	0
10/93	0	0	0	0	0
11/93	0	0	0	18640	0
12/93	0	0	0	7855	0
TOT/93	0	0	0	32361	0
1/94	0	0	0	4843	0
2/94	0	0	0	4739	0
3/94	0	0	0	4837	0
4/94	0	0	0	4724	0
5/94	0	0	0	4363	0
6/94	0	0	0	3813	0
7/94	0	0	0	3433	0
8/94	0	0	0	4001	0
9/94	0	0	0	4110	0
10/94	0	0	0	3056	0
11/94	0	0	0	3212	0
12/94	0	0	0	4466	0
TOT/94	0	0	0	49597	0
TOTAL	24726	84529	25824	81958	3419


10 100 1000 10000 GOR
10 100 1000 10000 WTR-BBLS
10 100 1000 10000 INJ-BBLS
10 100 1000 10000 GAS-MCF
10 100 1000 10000 OIL-BBLS
84 85 86 87 88 89 90 91 92 93 94 95 96 97 98
DATE
LEASE : QPBSSU 2A-1 (FED P #1)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 25.728
GAS-MCF 02/95 C= 91.607
INJ-BBLS 02/95 C= 146.626
WTR-BBLS 02/95 C= 18.899
GOR 02/95 C= 282.583

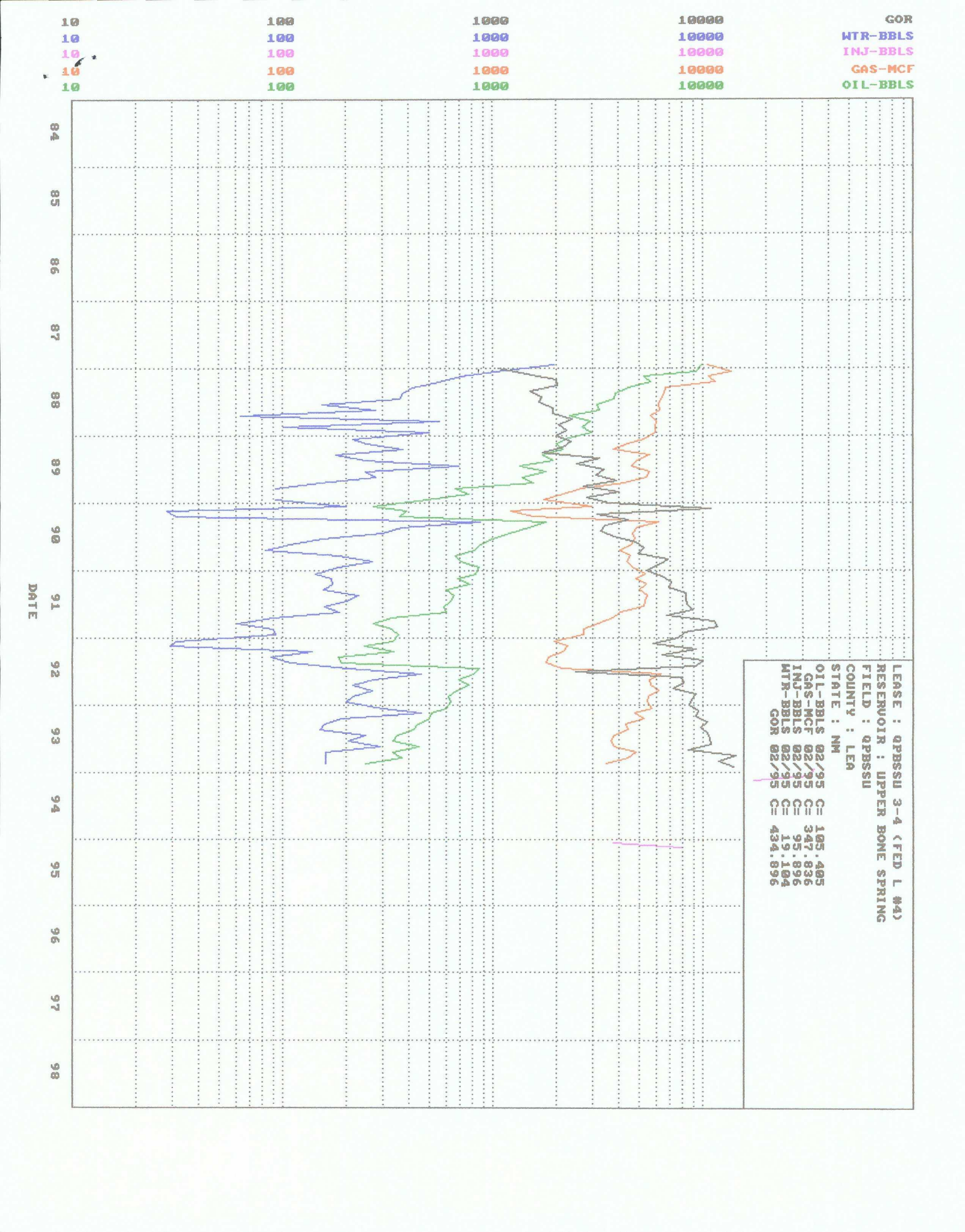
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	23086	70851	15861	0	3069
1/93	332	2598	342	0	7825
2/93	261	2229	350	0	8540
3/93	240	1461	400	0	6088
4/93	272	1017	300	0	3739
5/93	217	2094	300	0	9650
6/93	228	2862	238	0	12553
7/93	246	2030	247	0	8252
8/93	233	2233	233	0	9584
9/93	198	1803	228	0	9106
10/93	211	1366	200	0	6474
11/93	204	1063	200	0	5211
12/93	0	0	0	23579	0
TOT/93	2642	20756	3038	23579	7856
1/94	0	0	0	24295	0
2/94	0	0	0	15776	0
3/94	0	0	0	13226	0
4/94	0	0	0	10436	0
5/94	0	0	0	9088	0
6/94	0	0	0	7460	0
7/94	0	0	0	6837	0
8/94	0	0	0	7036	0
9/94	0	0	0	6050	0
10/94	0	0	0	4381	0
11/94	0	0	0	4522	0
12/94	0	0	0	5158	0
TOT/94	0	0	0	114265	0
TOTAL	25728	91607	18899	137844	3561


LEASE : QPBSSU 3-7 (FED L #7)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 53.515
GAS-MCF 02/95 C= 192.684
INJ-BBLS 02/95 C= 114.063
WTR-BBLS 02/95 C= 21.192
GOR 02/95 C= 289.302
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

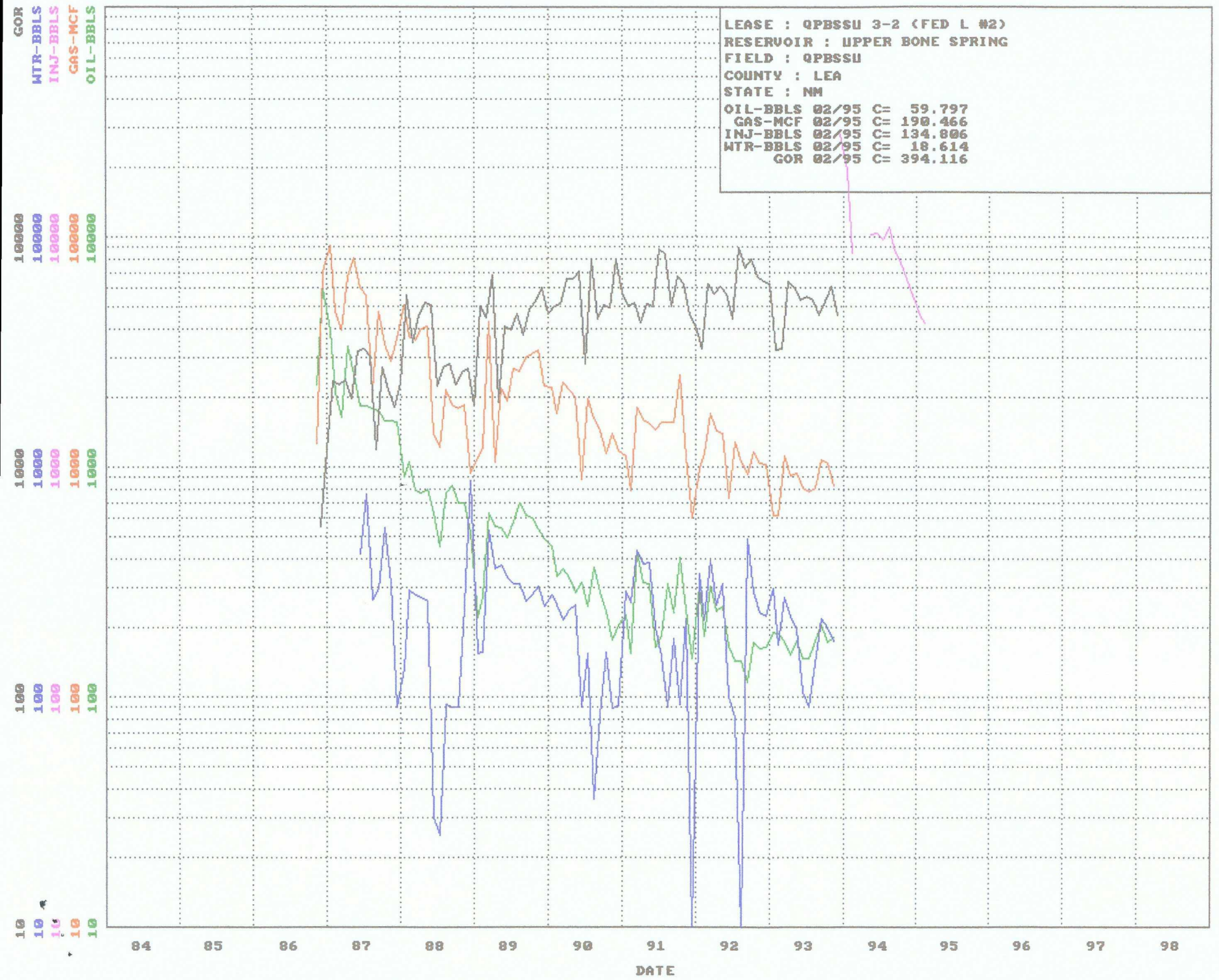
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	51118	184167	19355	0	3603
1/93	244	1008	284	0	4131
2/93	215	618	192	0	2874
3/93	251	896	191	0	3570
4/93	220	740	158	0	3364
5/93	220	757	140	0	3441
6/93	185	654	131	0	3535
7/93	210	632	128	0	3010
8/93	221	652	153	0	2950
9/93	224	924	160	0	4125
10/93	180	898	150	0	4989
11/93	227	738	150	0	3251
12/93	0	0	0	31787	0
TOT/93	2397	8517	1837	31787	3553
1/94	0	0	0	27932	0
2/94	0	0	0	13434	0
3/94	0	0	0	0	0
4/94	0	0	0	0	0
5/94	0	0	0	0	0
6/94	0	0	0	0	0
7/94	0	0	0	0	0
8/94	0	0	0	0	0
9/94	0	0	0	0	0
10/94	0	0	0	3726	0
11/94	0	0	0	11556	0
12/94	0	0	0	9737	0
TOT/94	0	0	0	66385	0
TOTAL	53515	192684	21192	98172	3601


10 100 1000 10000 GOR
10 100 1000 10000 WTR-BBLS
10 100 1000 10000 INJ-BBLS
10 100 1000 10000 GAS-MCF
10 100 1000 10000 OIL-BBLS
84 85 86 87 88 89 90 91 92 93 94 95 96 97 98
DATE
LEASE : QPBSSU 3-4 (FED L #4)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 105.405
GAS-MCF 02/95 C= 347.836
INJ-BBLS 02/95 C= 95.896
WTR-BBLS 02/95 C= 19.104
GOR 02/95 C= 434.896

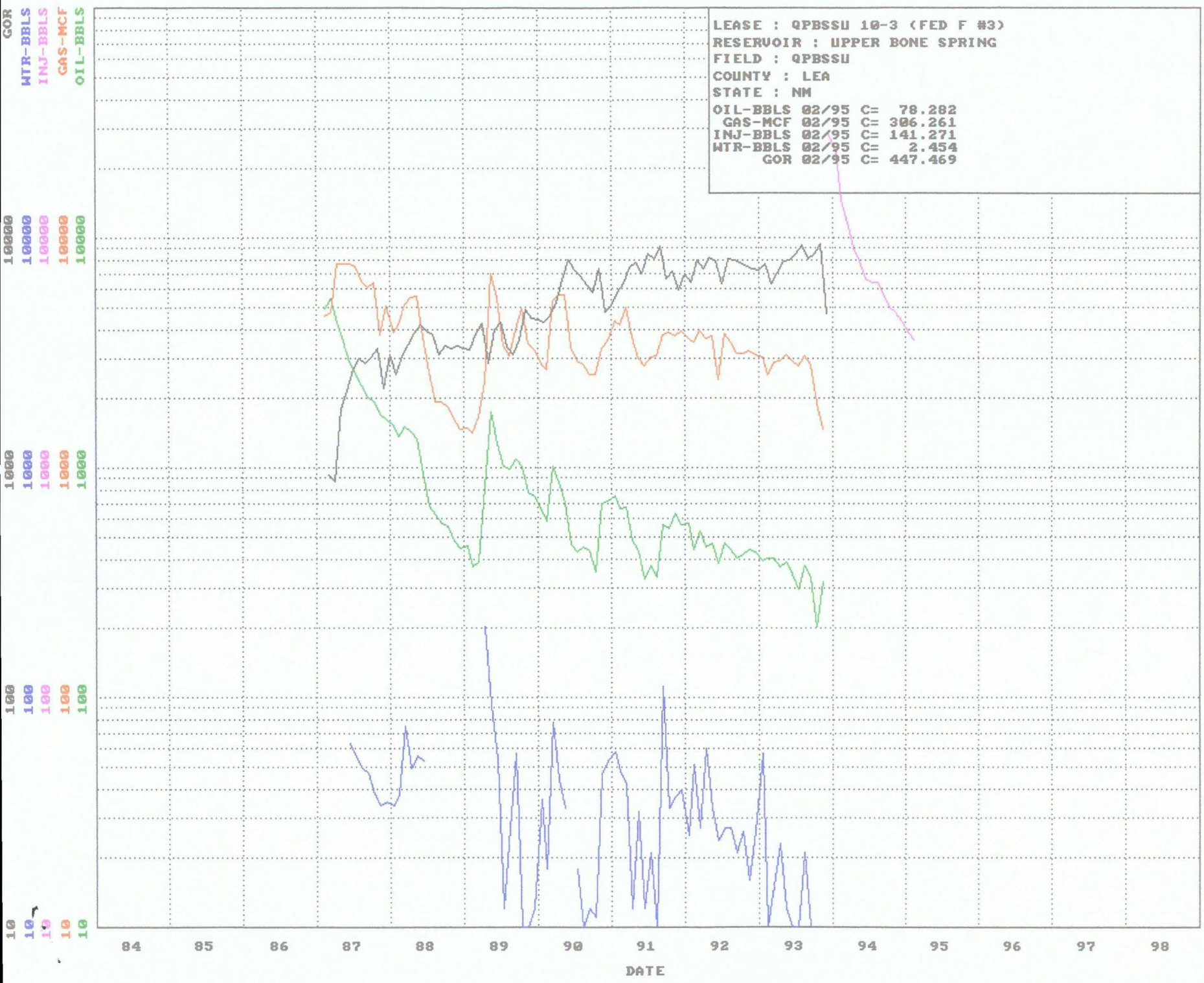
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	100853	299594	16624	0	2971
1/93	597	5710	300	0	9564
2/93	510	4743	456	0	9300
3/93	501	5234	190	0	10447
4/93	440	4303	158	0	9780
5/93	419	4399	150	0	10499
6/93	351	3783	248	0	10778
7/93	336	3649	205	0	10860
8/93	446	3771	293	0	8455
9/93	335	4804	160	0	14340
10/93	368	4376	160	0	11891
11/93	249	3470	160	0	13936
12/93	0	0	0	33974	0
TOT/93	4552	48242	2480	33974	10598
1/94	0	0	0	32796	0
2/94	0	0	0	17489	0
3/94	0	0	0	0	0
4/94	0	0	0	0	0
5/94	0	0	0	0	0
6/94	0	0	0	0	0
7/94	0	0	0	0	0
8/94	0	0	0	0	0
9/94	0	0	0	0	0
10/94	0	0	0	0	0
11/94	0	0	0	0	0
12/94	0	0	0	0	0
TOT/94	0	0	0	50285	0
TOTAL	105405	347836	19104	84259	3300


LEASE : QPBSSU 3-2 (FED L #2)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 59.797
GAS-MCF 02/95 C= 190.466
INJ-BBLS 02/95 C= 134.806
WTR-BBLS 02/95 C= 18.614
GOR 02/95 C= 394.116
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

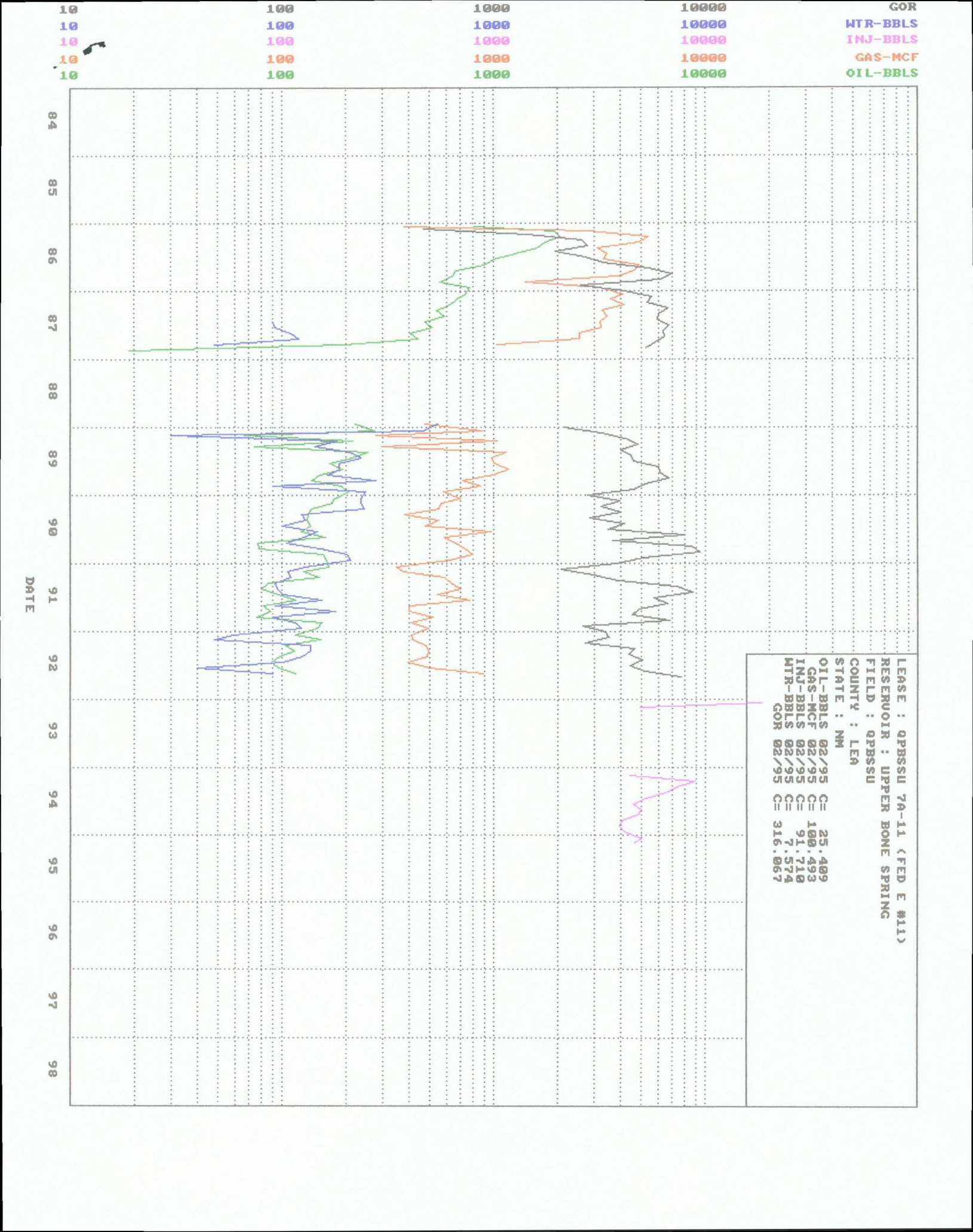
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	57887	180925	16531	0	3125
1/93	190	615	295	0	3237
2/93	188	617	168	0	3282
3/93	175	1112	270	0	6354
4/93	153	918	224	0	6000
5/93	176	938	196	0	5330
6/93	147	809	105	0	5503
7/93	147	781	90	0	5313
8/93	176	807	140	0	4585
9/93	205	1072	220	0	5229
10/93	172	1042	200	0	6058
11/93	181	830	175	0	4586
12/93	0	0	0	28034	0
TOT/93	1910	9541	2083	28034	4995
1/94	0	0	0	19574	0
2/94	0	0	0	8490	0
3/94	0	0	0	0	0
4/94	0	0	0	0	0
5/94	0	0	0	10306	0
6/94	0	0	0	10355	0
7/94	0	0	0	9787	0
8/94	0	0	0	10985	0
9/94	0	0	0	8683	0
10/94	0	0	0	7673	0
11/94	0	0	0	6522	0
12/94	0	0	0	5602	0
TOT/94	0	0	0	97977	0
TOTAL	59797	190466	18614	126011	3185


LEASE : QPBSSU 10-3 (FED F #3)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 78.282
GAS-MCF 02/95 C= 306.261
INJ-BBLS 02/95 C= 141.271
WTR-BBLS 02/95 C= 2.454
GOR 02/95 C= 447.469
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

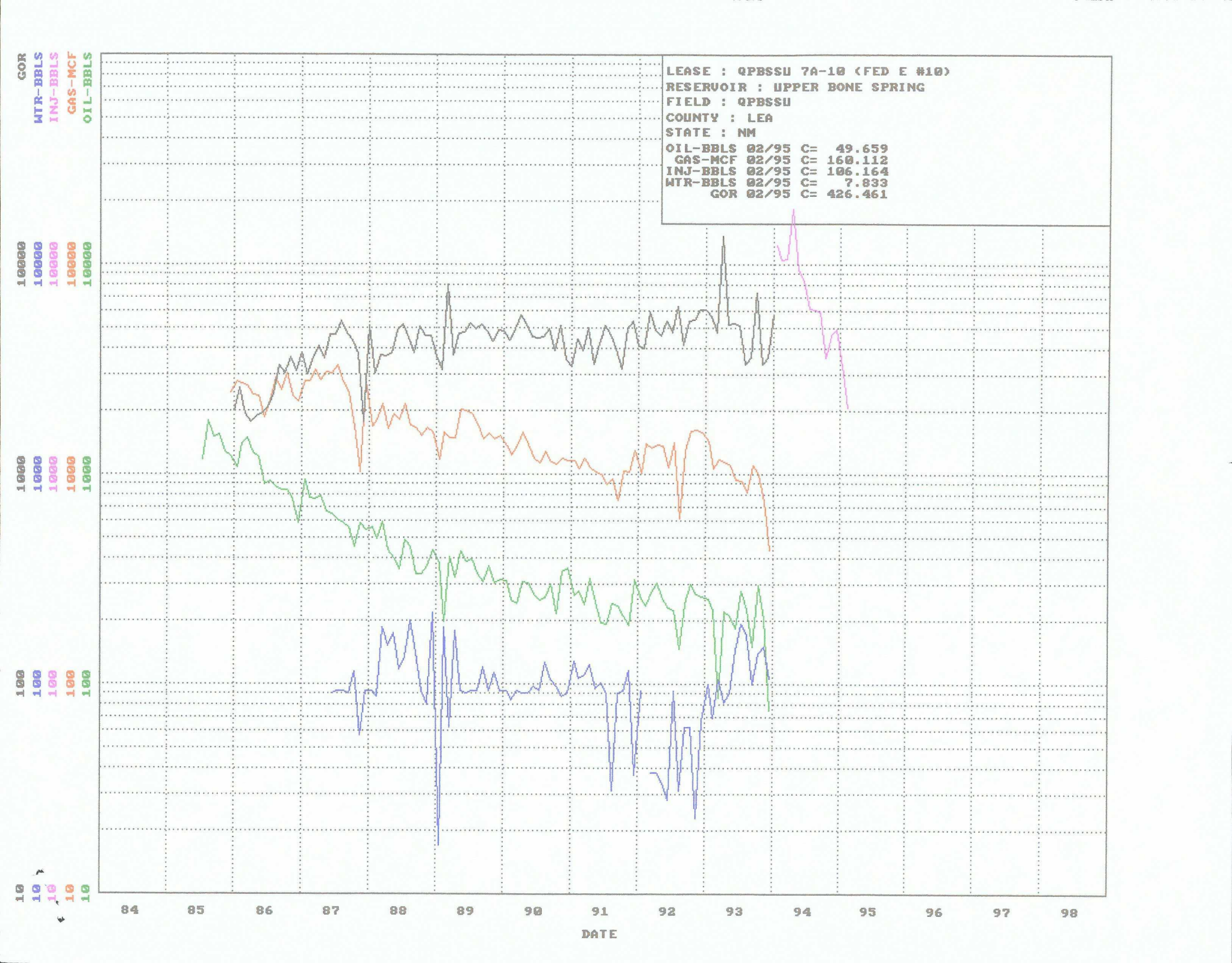
PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	74460	276881	2275	0	3719
1/93	392	3029	57	0	7727
2/93	402	2532	6	0	6299
3/93	404	2863	15	0	7087
4/93	369	2904	23	0	7870
5/93	389	3103	12	0	7977
6/93	345	2924	3	0	8475
7/93	297	2771	6	0	9330
8/93	375	3054	21	0	8144
9/93	329	2803	6	0	8520
10/93	203	1919	0	0	9453
11/93	317	1478	30	0	4662
12/93	0	0	0	28165	0
TOT/93	3822	29380	179	28165	7687
1/94	0	0	0	23254	0
2/94	0	0	0	14599	0
3/94	0	0	0	11661	0
4/94	0	0	0	9025	0
5/94	0	0	0	7865	0
6/94	0	0	0	6667	0
7/94	0	0	0	6399	0
8/94	0	0	0	6371	0
9/94	0	0	0	5702	0
10/94	0	0	0	5001	0
11/94	0	0	0	4758	0
12/94	0	0	0	4350	0
TOT/94	0	0	0	105652	0
TOTAL	78282	306261	2454	133817	3912


10 100 1000 10000 GOR
10 100 1000 10000 WTR-BBLS
10 100 1000 10000 INJ-BBLS
10 100 1000 10000 GAS-MCF
10 100 1000 10000 OIL-BBLS
84 85 86 87 88 89 90 91 92 93 94 95 96 97 98
DATE
LEASE : QPBSSU 7A-11 (FED E #11)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 25.409
GAS-MCF 02/95 C= 100.493
INJ-BBLS 02/95 C= 91.710
WTR-BBLS 02/95 C= 7.574
GOR 02/95 C= 316.067

PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	25409	100493	7574	0	3955
1/93	0	0	0	18465	0
2/93	0	0	0	4917	0
3/93	0	0	0	0	0
4/93	0	0	0	0	0
5/93	0	0	0	0	0
6/93	0	0	0	0	0
7/93	0	0	0	0	0
8/93	0	0	0	0	0
9/93	0	0	0	0	0
10/93	0	0	0	0	0
11/93	0	0	0	0	0
12/93	0	0	0	0	0
TOT/93	0	0	0	23382	0
1/94	0	0	0	0	0
2/94	0	0	0	4410	0
3/94	0	0	0	8914	0
4/94	0	0	0	7323	0
5/94	0	0	0	6433	0
6/94	0	0	0	5214	0
7/94	0	0	0	4557	0
8/94	0	0	0	5012	0
9/94	0	0	0	4797	0
10/94	0	0	0	4027	0
11/94	0	0	0	3916	0
12/94	0	0	0	4125	0
TOT/94	0	0	0	58728	0
TOTAL	25409	100493	7574	82110	3955


LEASE : QPBSSU 7A-10 (FED E #10)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 49.659
GAS-MCF 02/95 C= 160.112
INJ-BBLS 02/95 C= 106.164
WTR-BBLS 02/95 C= 7.833
GOR 02/95 C= 426.461
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
100000
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	47243	148214	6381	0	3137
1/93	255	1442	100	0	5655
2/93	225	1060	69	0	4711
3/93	86	1177	105	0	13686
4/93	223	1151	82	0	5161
5/93	212	1108	90	0	5226
6/93	185	940	145	0	5081
7/93	276	923	194	0	3344
8/93	228	823	171	0	3610
9/93	151	1107	100	0	7331
10/93	296	994	140	0	3358
11/93	204	738	150	0	3618
12/93	75	435	106	0	5800
TOT/93	2416	11898	1452	0	4925
1/94	0	0	0	12312	0
2/94	0	0	0	10516	0
3/94	0	0	0	10651	0
4/94	0	0	0	18344	0
5/94	0	0	0	9438	0
6/94	0	0	0	8441	0
7/94	0	0	0	6141	0
8/94	0	0	0	6107	0
9/94	0	0	0	5953	0
10/94	0	0	0	3593	0
11/94	0	0	0	4629	0
12/94	0	0	0	4919	0
TOT/94	0	0	0	101044	0
TOTAL	49659	160112	7833	101044	3224


LEASE : QPBSSU 11-2 (BURLESON FED #2)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 41.637
GAS-MCF 02/95 C= 80.670
INJ-BBLS 02/95 C= 73.770
WTR-BBLS 02/95 C= 28.894
GOR 02/95 C= 267.507
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
100000
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	40024	75926	27343	0	1897
1/93	183	542	171	0	2962
2/93	171	455	128	0	2661
3/93	165	492	125	0	2982
4/93	176	460	132	0	2614
5/93	152	412	152	0	2711
6/93	137	454	128	0	3314
7/93	150	397	212	0	2647
8/93	163	478	176	0	2933
9/93	139	461	132	0	3317
10/93	177	593	195	0	3350
11/93	0	0	0	4317	0
12/93	0	0	0	13887	0
TOT/93	1613	4744	1551	18204	2941
1/94	0	0	0	6100	0
2/94	0	0	0	5112	0
3/94	0	0	0	4704	0
4/94	0	0	0	4425	0
5/94	0	0	0	4014	0
6/94	0	0	0	3198	0
7/94	0	0	0	2204	0
8/94	0	0	0	3699	0
9/94	0	0	0	3639	0
10/94	0	0	0	2362	0
11/94	0	0	0	3182	0
12/94	0	0	0	4592	0
TOT/94	0	0	0	47231	0
TOTAL	41637	80670	28894	65435	1937


LEASE : QPBSSU 11-1 (BURLESON FED #1)
RESERVOIR : UPPER BONE SPRING
FIELD : QPBSSU
COUNTY : LEA
STATE : NM
OIL-BBLS 02/95 C= 58.144
GAS-MCF 02/95 C= 85.159
INJ-BBLS 02/95 C= 121.756
WTR-BBLS 02/95 C= 24.429
GOR 02/95 C= 224.988
GOR
WTR-BBLS
INJ-BBLS
GAS-MCF
OIL-BBLS
100000
10000
1000
100
10
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
DATE

PRODUCTION LEDGER

DATE	OIL, BBL	GAS, MCF	WATER, BBL	WTRINJ, BBL	GOR, CF/BBL
PRIOR	56675	80431	22902	0	1419
1/93	182	540	145	0	2967
2/93	171	454	128	0	2655
3/93	165	490	125	0	2970
4/93	135	458	131	0	3393
5/93	151	410	155	0	2715
6/93	137	453	128	0	3307
7/93	150	395	212	0	2633
8/93	162	477	176	0	2944
9/93	139	460	133	0	3309
10/93	77	591	194	0	7675
11/93	0	0	0	4699	0
12/93	0	0	0	24484	0
TOT/93	1469	4728	1527	29183	3219
1/94	0	0	0	11502	0
2/94	0	0	0	9360	0
3/94	0	0	0	9525	0
4/94	0	0	0	9376	0
5/94	0	0	0	8108	0
6/94	0	0	0	6627	0
7/94	0	0	0	5283	0
8/94	0	0	0	6112	0
9/94	0	0	0	4783	0
10/94	0	0	0	2404	0
11/94	0	0	0	3346	0
12/94	0	0	0	7115	0
TOT/94	0	0	0	83541	0
TOTAL	58144	85159	24429	112724	1465

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION
2040 S. PACHECO
SANTA FE, NEW MEXICO 87505
(505) 827-7131

May 10, 1995

Mewbourne Oil Company
P.O. Box 7698
Tyler, Texas 75711

Attention: Kevin Mayes, P.E.

Re: Positive Production Response
Querecho Plains Bone Spring Sand Unit

Dear Kevin:

Upon review of your recent application for certification of positive production response within the above-referenced waterflood project I have determined that a review of individual well production is necessary in order to ascertain whether such a response has occurred.

Please send individual well production on a monthly basis for 1993 and 1994 for each well in the EOR certified area. This should include production from producing wells prior to being converted to injection. If you have any questions, please contact me at (505) 827-8184.

Sincerely,

David Catanach
Engineer

MEWBOURNE OIL COMPANY

P.O. BOX 7698
TYLER, TEXAS 75711
903 - 561-2900
FAX 903 - 561-1870

May 17, 1995

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
2040 S. Pacheco
Santa Fe, New Mexico 87505

Attention: Mr. David Catanach

RE: **POSITIVE PRODUCTION RESPONSE CERTIFICATE**
Querecho Plains Bone Spring Sand Unit
Lea County, New Mexico

Dear David:

Pursuant to your letter of May 10, 1995, you should find enclosed both graphical production for the entire life and columnar production for years 1993 and 1994 for all wells involved with the referenced. I appreciate your quick response to our application. Should you have any questions or comments concerning this application, please contact me at (903) 561-2900.

Sincerely,

Kevin Mayes

Kevin Mayes, PE

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

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

December 6, 1993

Mewbourne Oil Company
Attention: K.M. Calvert
P.O. Box 7698
Tyler, TX 75711-7698

CERTIFICATION OF ENHANCED OIL RECOVERY PROJECT FOR RECOVERED OIL TAX RATE

The New Mexico Oil Conservation Division hereby certifies that the following Enhanced Oil Recovery Project has been approved by the Division as a secondary project, pursuant to the provisions of the *New Mexico Enhanced Oil Recovery Act* (Laws of 1992, Chapter 38). In order to qualify for the *Recovered Oil Tax Rate*, you must apply for certification of positive production response within five years from the date of this certification. Only production from that portion of the project area identified herein which is actually developed for enhanced recovery will qualify for the reduced tax rate.

If operation of this project is terminated for any reason, the operator of the project must notify this Division and the Secretary of the Taxation and Revenue Department not later than the thirtieth day after termination.

NAME OF PROJECT:	Quercho Plains Bone Spring Sand Unit Waterflood Project (Quercho Plains Bone Spring Sand Unit)
OCD ORDER NO.	R-9737-A
OPERATOR:	Mewbourne Oil Company
ADDRESS:	Attention: K.M. Calvert P.O. Box 7698 Tyler, TX 75711-7698
CERTIFICATION DATE:	November 1, 1993

PROJECT AREA:

Township 18 South, Range 32 East, NMPM

Section 13:	SW/4 SW/4
Section 14:	SE/4
Section 22:	SE/4 SE/4
Section 23:	NE/4 S/2 NW/4 and S/2

Section 24:	W/2 NW/4 and SW/4 SW/4
Section 26:	N/2 NE/4, SW/4 NE/4 and NW/4
Section 27:	E/2 NE/4, SW/4 NE/4, SE/4 NW/4 and E/2 SW/4

APPROVED BY:

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

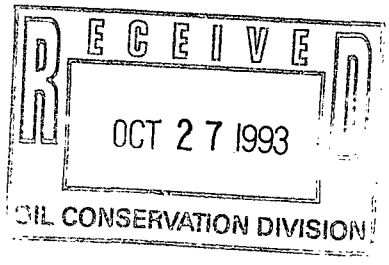
WILLIAM J. LEMAY
DIRECTOR

S E A L

MEWBOURNE OIL COMPANY

P.O. BOX 7698
TYLER, TEXAS 75711
903 - 561-2900
FAX 903 - 561-1870

October 20, 1993



William J. LeMay
Oil Conservation Division
P. O. Box 2308
Santa Fe, New Mexico 87503-2308

Dear Mr. LeMay:

Mewbourne Oil Company, the designated Operator of the Querecho Plains Bone Spring Unit pursuant to Division Order No. R-9985, hereby requests the Division to issue a Certificate of Qualification for the project area for the Unit, as approved in Division Order No. R-9737-A. The initial project area is described in Ordering Paragraph No. (3) of said Order. Mewbourne Oil Company wishes to commence injection by November 1, 1993, and thus your attention to this matter is appreciated.

MEWBOURNE OIL COMPANY

By: K. M. Calvert

K. M. Calvert
Engineering Manager
Secondary Recovery

KMC/sh
Attachment: Certificate of Qualification

Mewbourne Oil Company
Att: K. M. Calvert
P. O. Box 7698
Tyler, Texas 75711

CERTIFICATION OF ENHANCED OIL RECOVERY PROJECT FOR RECOVERED OIL TAX RATE

The New Mexico Oil Conservation Division hereby certifies that the following Enhanced Oil Recovery Project has been approved by the Division as a secondary project, pursuant to the provisions of the New Mexico Enhanced Oil Recovery Act (L. 1992, Ch. 38). In order to qualify for the Recovered Oil Tax Rate, you must apply for certification of positive production response within five years from the date of this certification. Only production from that portion of the project area identified herein which is actually developed for enhanced recovery will qualify for the reduced tax rate.

If operation of this project is terminated for any reason, the operator of the project must notify this Division and the Secretary of Taxation and Revenue not later than the thirtieth day after termination.

Name of Project:	Querecho Plains Bone Spring Sand Unit Waterflood Project (Querecho Plains Bone Spring Sand Unit)
OCD Order No.:	9737-A
Operator and Address:	Mewbourne Oil Company Att: K. M. Calvert P. O. Box 7698 Tyler, Texas 75711-7698
Certification Date:	November 1, 1993

Initial Project Area

Township 18 South, Range 32 East, N.M.P.M.

Section 13: SW/4 SW/4
Section 14: SE/4
Section 22: SE/4 SE/4
Section 23: NE/4, S/2 NW/4 and S/2
Section 24: W/2 NW/4 and SW/4 SW/4
Section 26: N/2 NE/4, SW/4 NE/4 and NW/4
Section 27: E/2 NE/4, SW/4 NE/4, SE/4 NW/4, and E/2 SW/4

APPROVED

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

WILLIAM J. LEMAY
Director

S E A L

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

BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

February 2, 1994

Department of Taxation and Revenue
P.O. Box 630
Santa Fe, NM 87509-0630

Attention: Dick Minzner, Secretary

RE: Certification of EOR Project
Mewbourne Oil Company
Quercho Plains Bone Spring Sand Unit Waterflood Project
(Quercho Plains Bone Spring Sand Unit)

Dear Secretary Minzner:

Enclosed is a copy of the certification issued to Mewbourne Oil Company for its Quercho Plains Bone Spring Sand Unit Waterflood EOR project, certified by this Division on November 1, 1993, to be a qualified Enhanced Oil Recovery Project. If the operator applies for certification of positive production response within five years from that date, this project will be eligible for the *Recovered Oil Tax Rate* as provided in Laws of 1992, Chapter 38.

Only oil production from that portion of the lands identified in the certification which is actually developed for enhanced recovery will be eligible for the reduced tax rate. At the time positive production response is certified, we will identify for you the specific lands and wells within the project which qualify for the *Recovered Oil Tax Rate.*

Sincerely,

William J. LeMay
Director

WJL/amg

Enclosures

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. 10762
Order No. R-9737-A

APPLICATION OF MEWBOURNE OIL COMPANY FOR A WATERFLOOD PROJECT AND QUALIFICATION FOR THE RECOVERED OIL TAX RATE, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on July 1, 1993, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this 13th day of October, 1993, 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) At the time of the hearing this case was consolidated with Division Case No. 10761 for the purpose of testimony.

(3) By Division Order No. R-9737, issued in Case No. 10497 and dated October 1, 1992, Mewbourne Oil Company was authorized to convert its Government "K" Well No. 2, located 1950 feet from the South line and 1980 feet from the West line (Unit K) of Section 23, and its Federal "E" Well No. 11, located 660 feet from the North line and 530 feet from the East line (Unit A) of Section 27, both in Township 18 South,

Range 32 East, NMPM, Lea County, New Mexico, into water injection wells for the purpose of testing the "injectivity" of the Querecho Plains-Upper Bone Spring Pool for a sufficient period of time to establish stabilized injection rates in order to determine the feasibility of commencing a waterflood project in this general area to be unitized at a later date.

(4) The applicant, Mewbourne Oil Company, at this time seeks authority to institute a waterflood project in its proposed Querecho Plains Bone Spring Sand Unit Area (Division Case No. 10761), Lea County, New Mexico, by the injection of water into the designated and Undesignated Querecho Plains-Upper Bone Spring Pool, as found in that stratigraphic interval between 8,328 feet to 8,620 feet as measured on the *Welex - Spectral Density Dual Spaced Neutron Log* ran on November 28, 1987 in the applicant's Federal Well No. 4 located 660 feet from the North line and 1650 feet from the East line (Unit B) of Section 23, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico, through fifteen certain wells to be converted from producing wells to injectors, as further described in Exhibit "A" attached hereto and made a part hereof.

(5) It is proposed that the waterflood project area coincide with the boundary of the Querecho Plains Bone Spring Sand Unit Area in Lea County, New Mexico, as further described below, which was the subject of Division Case No. 10761 and was heard in combination with this case:

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM
Section 13: S/2 SW/4
Section 14: SE/4
Section 22: NE/4 SE/4 and S/2 SE/4
Section 23: All
Section 24: W/2 NW/4 and SW/4 SW/4
Section 26: N/2
Section 27: All
Section 28: E/2

(6) The above-described area contains several tracts of undeveloped acreage; therefore, in compliance with Division General Rule 701.G(1) the project area as requested should be reduced to include only those oil spacing and proration units within the proposed area that have experienced production from the Querecho Plains-Upper Bone Spring Pool, being the following described 2,040 acres in Lea County, New Mexico:

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM
Section 13: SW/4 SW/4
Section 14: SE/4
Section 22: SE/4 SE/4
Section 23: NE/4, S/2 NW/4 and S/2
Section 24: W/2 NW/4 and SW/4 SW/4
Section 26: N/2 NE/4, SW/4 NE/4 and NW/4
Section 27: E/2 NE/4, SW/4 NE/4, SE/4 NW/4 and E/2 SW/4

(7) The present Upper Bone Spring oil producing wells within the subject project area are in an advanced state of depletion and should therefore be properly classified as "stripper wells".

(8) The results of the injectivity test approved by said Order No. R-9737 indicates that both of the test wells are capable of injection rates of 700 to 800 barrels of water per day at the maximum injection pressure of 1650 psi permitted by said Order No. R-9737. Further, injection surveys from both wells indicated that the injected waters remained confined to the Upper Bone Spring interval.

(9) The applicant further requests a surface limitation pressure in excess of the Division's guidelines of 0.2 psi per foot of depth, but not in excess of 2,000 psi surface pressure.

(10) In support of this request the applicant presented additional results from its injectivity tests, showing that the Delaware produced water utilized for injection had a gradient hydrostatic head of 0.51 psi per foot. While injecting this "heavy water" at the maximum 1650 psi (as permitted by Order R-9737) the total gradient hydrostatic head generated at depth was equal to 0.70 psi per foot. The applicant testified that the average formation fracture gradient for the Querecho Plains-Upper Bone Spring Pool is equal to 0.74 psi per foot as determined by the initial shut-in pressures from fracture stimulations which were performed on several wells in the general area. Injected waters to be utilized in this project initially will consist of fresh water to be purchased from the City of Carlsbad, New Mexico (approximately 90 percent of volume) with the remaining volume to be produced salt water from surrounding operators. The fluid gradient for this "less heavy" water is expected to be approximately 0.45 psi per foot. With a 2,000 psi pressure limit at the surface the total gradient hydrostatic head generated at depth calculates out at 0.69 psi per foot, which is below the fracture gradient for the pool.

(11) The increase in surface injection pressure as requested by the applicant is not expected to have an adverse effect on the unitized interval, further the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(12) The operator of the proposed Querecho Plains Bone Spring Sand Unit Waterflood Project should take all steps necessary to ensure that the injected water enters and remains confined to only the proposed injection interval (Upper Bone Spring zone) and is not permitted to escape from that interval and migrate into other formations, producing intervals, pools or onto the surface from injection, production, or plugged and abandoned wells.

(13) The previously plugged and abandoned BTA Oil Producers Cinco de Mayo Federal Well No. 1, the former Ralph Lowe Yates-Federal Well No. 1, located 660 feet from the North line and 1980 feet from the West line (Unit C) of Section 24, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico, is located within the one-half mile "area of review" of the proposed Federal "P" (water inject) Well No. 1, located 660 feet from the North and West lines (Unit D) of said Section 24.

Prior to commencement of injection into said Federal "P" Well No. 1, the operator should demonstrate to the satisfaction of the supervisor of the Division's District Office in Hobbs that the BTA Oil Producers Cinco de Mayo Federal Well No. 1, the former Ralph Lowe Yates-Federal Well No. 1, as described above, has been re-entered and replugged in such a manner as to ensure that it does not provide an avenue of escape for waters from the proposed injection interval.

(14) Likewise, the previously plugged and abandoned Lewis B. Burleson, Inc. Anadarko Federal Well No. 1, located 660 feet from the South line and 1980 feet from the West line (Unit N) of Section 27, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico, is located within the one-half mile "area of review" of the proposed Federal "E" (water inject) Well No. 10, located 2310 feet from the North and East lines (Unit G) of said Section 27.

Prior to commencement of injection into said Federal "E" Well No. 10, the operator should demonstrate to the satisfaction of the supervisor of the Division's District Office in Hobbs that the Lewis B. Burleson, Inc. Anadarko Federal Well No. 1, as described above, has either been re-entered and replugged or has previously been plugged and abandoned in such a manner as to ensure that it does not provide an avenue of escape for waters from the proposed injection interval of the Mewbourne well or that said wellbore will not otherwise serve for such escape.

(15) From the evidence presented at the hearing it appears the applicant's existing Federal "E" Well No. 1, located 660 feet from the North line and 1980 feet from the East line (Unit B) of Section 27, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico, which is also within this "area of review" and currently completed in and producing from the North Lusk-Morrow Gas Pool, is not cemented or completed in such a manner which will prevent the migration of fluid from the proposed injection zone.

Therefore, prior to commencing injection operations into the Federal "E" Well Nos. 10 and 11 located in Units "G" and "A", respectively, of said Section 27 the operator should demonstrate to the satisfaction of the supervisor of the Division's District Office in Hobbs that the Federal "E" Well No. 1, as described above, has either been recompleted or is shown to have been previously completed in such a manner as to ensure that they do not provide an avenue of escape for waters from the proposed injection interval of the Mewbourne Morrow gas well or that said wellbore will not otherwise serve for such escape.

(16) Sufficient evidence on the corrosive nature of the proposed injection fluid was submitted by the applicant to support its request to utilize "bare steel" tubing instead of internally plastic-coated tubing at this time.

(17) The injection of water into the proposed injection wells should be accomplished either through 2 3/8-inch or 2 7/8-inch steel tubing installed in a packer set within 100 feet of the uppermost injection perforation; the casing-tubing annulus should be filled with an inert fluid and a gauge or approved leak-detection device should be attached to the annulus in order to determine leakage in the casing, tubing or packer.

(18) Prior to commencing injection operations into the proposed injection wells, the casing in each 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.

(19) The injection wells or pressurization system for each well should be so equipped as to limit injection pressure at the wellhead to no more than 2,000 psi.

(20) Any further increase in the injection pressure limitation placed upon any well in the project area should only be approved after proper notice and hearing.

(21) The operator should give advance notification to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure-tests in order that the same may be witnessed.

(22) The proposed waterflood project should be approved and the project should be governed by the provisions of Rule Nos. 701 through 708 of the Oil Conservation Division Rules and Regulations.

(23) The applicant further requests that the subject waterflood project be approved by the Division as a qualified "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(24) The evidence presented indicates that the subject waterflood project meets all the criteria for approval.

(25) The approved "project area" should initially comprise that area described in Finding Paragraph No. (6) above.

(26) To be eligible for the EOR credit, prior to commencing injection operations, the operator must request from the Division a Certificate of Qualification, which certificate will specify the proposed project area as described above.

(27) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to the Department of Taxation and Revenue those lands and wells which are eligible for the credit.

(28) The injection authority granted herein for the proposed injection wells should terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

IT IS THEREFORE ORDERED THAT:

(1) The applicant, Mewbourne Oil Company, is hereby authorized to institute a waterflood project in its Querecho Plains Bone Spring Sand Unit Area (Division Case No. 10761), Lea County, New Mexico, by the injection of water into the designated and Undesignated Querecho Plains-Upper Bone Spring Pool (as found in that stratigraphic interval between 8,328 feet to 8,620 feet as measured on the *Welex - Spectral Density Dual Spaced Neutron Log* ran on November 28, 1987 in the applicant's Federal Well

No. 4 located 660 feet from the North line and 1650 feet from the East line (Unit B) of Section 23, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico) through fifteen certain wells to be converted from producing wells to injectors, as further described in Exhibit "A" attached hereto and made a part hereof.

(2) The waterflood project, hereby designated the Querecho Plains Bone Spring Sand Unit Waterflood Project, shall coincide with the boundary of the Querecho Plains Bone Spring Sand Unit Area, as further described below, and was the subject of Division Case No. 10761 which was heard in combination with this case:

QUERECHO PLAINS BONE SPRING SAND UNIT WATERFLOOD PROJECT
LEA COUNTY, NEW MEXICO

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM
Section 13: S/2 SW/4
Section 14: SE/4
Section 22: NE/4 SE/4 and S/2 SE/4
Section 23: All
Section 24: W/2 NW/4 and SW/4 SW/4
Section 26: N/2
Section 27: All
Section 28: E/2

(3) However, the initial waterflood project area, for allowable and tax credit purposes shall comprise only the following described 2040 acres in Lea County, New Mexico:

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM
Section 13: SW/4 SW/4
Section 14: SE/4
Section 22: SE/4 SE/4
Section 23: NE/4, S/2 NW/4 and S/2
Section 24: W/2 NW/4 and SW/4 SW/4
Section 26: N/2 NE/4, SW/4 NE/4 and NW/4
Section 27: E/2 NE/4, SW/4 NE/4, SE/4 NW/4 and E/2 SW/4

(4) The applicant must take all steps necessary to ensure that the injected water only enters and remains confined to the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

PROVIDED HOWEVER THAT:

(5) Injection into the Federal "P" Well No. 1, located 660 feet from the North and West lines (Unit D) of Section 24, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico, shall not commence until the previously plugged and abandoned BTA Oil Producers Cinco de Mayo Federal Well No. 1, the former Ralph Lowe Yates-Federal Well No. 1, located 660 feet from the North line and 1980 feet from the West line (Unit C) of said Section 24, has either been re-entered and replugged or is shown to have been adequately plugged and abandoned in a manner that ensures it does not provide an avenue of escape for waters from the proposed injection interval to the satisfaction of the Supervisor of the Division's District Office in Hobbs.

(6) FURTHER, injection into the Federal "E" Well No. 10, located 2310 feet from the North and East lines (Unit G) of Section 27, Township 18 South, Range 32 East, NMPM, Lea County, New Mexico, shall not commence until the previously plugged and abandoned Lewis B. Burleson, Inc. Anadarko Federal Well No. 1, located 660 feet from the South line and 1980 feet from the West line (Unit N) of said Section 27, has either been re-entered and re-plugged or is shown to have been adequately plugged and abandoned in a manner that ensures it does not provide an avenue of escape for waters from the proposed injection interval to the satisfaction of the Supervisor of the Division's District Office in Hobbs.

(7) ALSO, injection into the Federal "E" Well Nos. 10 and 11 located in Units "G" and "A", respectively, of said Section 27, shall not commence until the applicant's Federal "E" Well No. 1, located 660 feet from the North line and 1980 feet from the East line (Unit B) of said Section 27, has either been recompleted or is shown to have been previously completed in such a manner as to ensure that they do not provide an avenue of escape for waters from the proposed injection interval to the satisfaction of the Supervisor of the Division's District Office in Hobbs.

IT IS FURTHER ORDERED THAT:

(8) Injection shall be accomplished through 2 3/8-inch or 2 7/8-inch bare steel tubing installed in a packer set approximately within 100 feet of the uppermost injection perforation; the casing-tubing annulus in each well shall be filled with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.

(9) The injection wells or pressurization system for each injection well shall be so equipped as to limit injection pressure at the wellhead to no more than 2,000 psi.

(10) Any additional increase in the injection pressure limitation placed upon any well in the project area shall only be approved after proper notice and hearing.

(11) Prior to commencing injection operations, the casing in each injection well shall be pressure-tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(12) The operator shall give advance notification to the supervisor of the Hobbs District Office of the Division of the date and time of the installation of injection equipment and of the mechanical integrity pressure-test in order that the same may be witnessed.

(13) The applicant shall immediately notify the supervisor of the Hobbs District Office of the Division of the failure of the tubing, casing or packer in any of the injection wells, the leakage of water or oil from or around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area, and shall take such steps as may be timely and necessary to correct such failure or leakage.

(14) The applicant shall conduct injection operations in accordance with Division Rule Nos. 701 through 708 and shall submit monthly progress reports in accordance with Division Rule Nos. 706 and 1115.

FURTHERMORE:

(15) The subject waterflood project is hereby approved as an "Enhanced Oil Recovery Project" pursuant to the "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Sections 1 through 5).

(16) The approved "project area" shall initially comprise that area described in Decretory Paragraph No. (3) above.

(17) To be eligible for the EOR credit, prior to commencing injection operations, the operator must request from the Division a Certificate of Qualification, which certificate will specify the proposed project area as described above.

(18) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the applicant must apply to the Division for certification of positive production response, which application shall identify the area actually benefitting from enhanced recovery operations, and identifying the specific wells

which the operator believes are eligible for the credit. The Division may review the application administratively or set it for hearing. Based upon evidence presented, the Division will certify to the Department of Taxation and Revenue those lands and wells which are eligible for the credit.

(19) The injection authority granted herein for the proposed injection wells shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject wells, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

(20) 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

WILLIAM J. LeMAY
Director

S E A L

EXHIBIT "A"

CASE NO. 10762
ORDER NO. R-9737-A

Mewbourne Oil Company

Proposed Injection Well Locations
Querecho Plains Bone Spring Sand Unit Waterflood Project Area
Township 18 South, Range 32 East, NMPM,
Lea County, New Mexico

Well Name and Number	Footage Location	Section	Unit	Proposed Injection Interval (Feet)
Santa Fe Energy Operating Partners, L.P. Shinnery "14" Federal Well No. 4	1980'FSL - 660'FEL	14	I	8412 - 8490
Santa Fe Energy Operating Partners, L.P. Shinnery "14" Federal Well No. 3	1980'FS & EL	14	J	8478 - 8504
Federal "L" Well No. 5	660' FN & EL	23	A	8430 - 8574
Federal "L" Well No. 4	660'FNL - 1650'FEL	23	B	8431 - 8506
Federal "L" Well No. 7	2310'FSL - 990'FEL	23	I	8485 - 8552
Federal "L" Well No. 2	2130'FSL - 2030'FEL	23	J	8458 - 8531
Government "K" Well No. 2	1950'FSL - 1980'FWL	23	K	8343 - 8515
Federal "F" Well No. 3	1980'FSL - 990'FWL	23	L	8362 - 8436
Federal "P" Well No. 1	660'FN & WL	24	D	8473 - 8545
Burleson Federal Well No. 2	660'FN & EL	26	A	8515 - 8584
Burleson Federal Well No. 1	660'FNL - 2310'FEL	26	B	8512 - 8572
Sprinkle Federal Well No. 2	660'FNL - 1980'FWL	26	C	8542 - 8574
Sprinkle Federal Well No. 1	660'FN & WL	26	D	8507 - 8532
Federal "E" Well No. 11	660'FNL - 530'FEL	27	A	8360 - 8388
Federal "E" Well No. 10	2310'FN & EL	27	G	8501 - 8530

PRODUCING WELLS
QUERECHO PLAINS BONE SPRING SAND UNIT
T18S, R32E, Lea County, New Mexico

Well No.	Location	Completion Date	Status	
QPBSSU 15-1	13M	03/24/89	P	30-025-30462
QPBSSU 12A-1	14O	02/07/89	P	30-025-30478
QPBSSU 12B-2	14P	06/16/89	P	30-025-30569
QPBSSU 9-2	22P	04/05/86	P	30-025-29628
QPBSSU 3-5	23A	12/09/87	P	30-025-30341
QPBSSU 14A-1	23E	10/06/87	P	30-025-29938
QPBSSU 5-2	23F	12/13/86	P	30-025-29790
QPBSSU 3-3	23G	08/05/87	P	30-025-29954
QPBSSU 3-6	23H	08/30/88	P	30-025-30342
QPBSSU 13-1	23M	02/15/86	P	30-025-29537
QPBSSU 13-2	23N	06/05/86	P	30-025-29679
QPBSSU 3-1	23O	05/24/86	P	30-025-29674
QPBSSU 2B-2	24E	09/30/89	P	30-025-30636
QPBSSU 6-1	24M	03/19/86	P	30-025-29623
QPBSSU 12F-3	26E	04/10/86	P	30-025-29616
QPBSSU 7B-13	27F	10/09/87	P	30-025-29994
QPBSSU 7A-12	27H	04/27/86	P	30-025-29629
QPBSSU 8-1	27K	02/15/84	P	30-025-25894

County Pool

TOWNSHIP Range NMPM