

HINKLE, COX, EATON, COFFIELD & HENSLEY,
L.L.P.

ATTORNEYS AT LAW

218 MONTEZUMA POST OFFICE BOX 2068
SANTA FE, NEW MEXICO 87504-2068
(505) 982-4554 FAX (505) 982-8623

LEWIS C. COX, JR. (1924-1993)
CLARENCE E. HINKLE (1901-1985)

OF COUNSEL
O. M. CALHOUN* JOE W. WOOD
RICHARD L. CAZZELL* RAY W. RICHARDS*

AUSTIN AFFILIATION
HOFFMAN & STEPHENS, P.C.
KENNETH R. HOFFMAN*
TOM D. STEPHENS*
RONALD C. SCHULTZ, JR.*
JOSE CANO*

THOMAS E. HOOD*
REBECCA NICHOLS JOHNSON
STANLEY K. KOTOVSKY, JR.
ELLEN S. CASEY
MARGARET CARTER LUDEWIG
S. BARRY PAISNER
W. ATT L. BROOKS*
DAVID M. RUSSELL*
ANDREW J. CLOUTIER
STEPHANIE LANDRY
KIRT E. MOELLING*
DIANE FISHER
JILLIE P. NEERKEN
WILLIAM R. SLATTERY
CHRISTOPHER M. MOODY
JOHN D. PHILLIPS
EARL R. NORRIS
JAMES A. GILLESPIE
MARGARET R. MCNETT

GARY W. LARSON
LISA K. SMITH*
NORMAN D. EWART
DARREN T. GROCE*
MOLLY MCINTOSH
MARCIA B. LINCOLN
SCOTT A. SHUART*
PAUL G. NASON
AMY C. WRIGHT*
BRADLEY G. BISHOP*
KAROLYN KING NELSON
ELLEN T. LOUDERBOUGH
JAMES H. WOOD*
NANCY L. STRATTON
TIMOTHY R. BROWN
JAMES C. MARTIN

*NOT LICENSED IN NEW MEXICO

May 20, 1996

VIA HAND DELIVERY

David Catanach
Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87501

Re: Case No. 11531

Dear Mr Catanach:

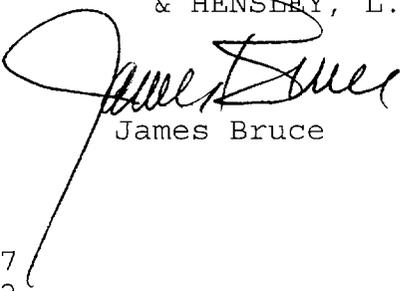
Enclosed, as requested at hearing, is a listing of well numbers, well locations, and API numbers for all wells in the West Lovington Strawn Unit ("WLSU"). The WLSU Well No. 7 is the sole injection well for the unit.

Also, to clarify one question which came up during the hearing: In 1995 there was a production increase from the pool before the WLSU was instituted. This production increase was due to two wells drilled in early 1995 (the WLSU Nos. 9 and 11); it was not due to an increase in production from existing wells.

Please call if you need anything further in this matter.

Very truly yours,

HINKLE, COX, EATON, COFFIELD
& HENSLEY, L.L.P.


James Bruce

JB/bc
Enclosure
cc: William Crow
Post Office Box 2557
Midland, Texas 79702

POST OFFICE BOX 10
ROSWELL, NEW MEXICO 88202
(505) 622-6510
FAX (505) 623-9332

POST OFFICE BOX 3580
MIDLAND, TEXAS 79702
(915) 683-4691
FAX (915) 683-6518

POST OFFICE BOX 9238
AMARILLO, TEXAS 79105
(806) 372-5569
FAX (806) 372-9761

POST OFFICE BOX 2043
ALBUQUERQUE, NEW MEXICO 87103
(505) 768-1500
FAX (505) 768-1529

401 W. 15TH STREET, SUITE 800
AUSTIN, TEXAS 78701
(512) 476-7137
FAX (512) 476-5431

WEST LOVINGTON STRAWN
LEA COUNTY, NEW MEXICO

<u>Well Name</u>	<u>Legal</u>	<u>Unit</u>	<u>Sec.</u>	<u>Twnshp</u>	<u>Range</u>	<u>API#</u>
WLSU #1	SW/4SE/4	O	33	15S	35E	30-025-31531
WLSU #2	SE/4SE/4	P	33	15S	35E	30-025-31767
WLSU #3	NE/4SW/4	K	33	15S	35E	30-025-32184
WLSU #4	SE/4SW/4	N	33	15S	35E	30-025-32230
WLSU #5	LOT 2	B	01	16S	35E	30-025-31830
WLSU #6	LOT 1	A	01	16S	35E	30-025-31831
* WLSU #7	LOT 3	C	01	16S	35E	30-025-31646
WLSU #8	NW/4SW/4	L	34	15S	35E	30-025-32291
WLSU #9	SW/4SW/4	M	34	15S	35E	30-025-32812
WLSU #10	SW/4NE/4	G	33	15S	35E	30-025-32526
WLSU #11	NW/4NE/4	B	33	15S	35E	30-025-32852

LARGE FORMAT
EXHIBIT HAS
BEEN REMOVED
AND IS LOCATED
IN THE NEXT FILE

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. 11194
Order No. R-10448

APPLICATION OF GILLESPIE-CROW INC.
FOR APPROVAL OF A PRESSURE MAINTENANCE
PROJECT AND QUALIFICATION FOR THE
RECOVERED OIL TAX RATE PURSUANT TO
THE "NEW MEXICO ENHANCED OIL RECOVERY
ACT", LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8:15 a.m. on June 15, 1995, at Santa Fe, New Mexico, before Examiner David R. Catanach.

NOW, on this 29th day of August, 1995, 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) Division Case Nos. 11194 and 11195 were consolidated at the time of the hearing for the purpose of testimony.
- (3) The applicant, Gillespie-Crow, Inc., seeks authority to institute a pressure maintenance project within its West Lovington Strawn Unit Area (being the subject of Division Case No. 11195) comprising the following described area in Lea County, New Mexico, by the injection of gas into the Strawn formation, West Lovington-Strawn Pool, through the perforated interval from approximately 11,424 feet to 11,434 feet in its Speight Fee Well No. 1 located 660 feet from the North line and 2310 feet from the West line (Unit C) of Section 1, Township 16 South, Range 35 East, NMPM:

NEW MEXICO
OIL CONSERVATION DIVISION

EXHIBIT

CASE NO.

2
11531

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM

Section 33: All
Section 34: W/2

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM

Section 1: Lots 1 through 8

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Section 6: Lots 3 through 5

(4) The West Lovington-Strawn Pool was created by Division Order No. R-9722 on September 23, 1992. The pool was discovered by the Charles B. Gillespie, Jr. Hamilton Federal Well No. 1 located in Unit O of Section 33, Township 15 South, Range 35 East, NMPM.

(5) The West Lovington-Strawn Pool is nearly fully developed with eleven producing wells, all of which are operated by Gillespie-Crow, Inc.

(6) The engineering evidence presented by the applicant indicates that:

- a) the West Lovington-Strawn Pool is a solution gas-drive reservoir whose pressure has declined to the point that the reservoir is rapidly approaching critical gas saturation;
- b) additional decline in reservoir pressure will result in the release of additional gas from solution which will be mobile and will flow into wellbores. As this occurs, producing gas-oil ratios will rapidly increase, oil producing rates will decrease and the reservoir energy will rapidly dissipate. The premature dissipation of reservoir energy will result in reduced ultimate oil recoveries from the West Lovington-Strawn Pool; and,
- c) the applicant proposes to inject gas into a single well at the highest portion of the Strawn structure. As a result of this injection, a gas cap will be created and the depletion of reservoir energy will be slowed, thereby resulting in the recovery of additional oil from the reservoir.

(7) Applicant testified that the proposed pressure maintenance project should result in the recovery of an additional 1.6-2.3 million barrels of oil from the project area which may otherwise not be recovered, thereby preventing waste.

(8) Initial capital investment to initiate the proposed pressure maintenance project is projected to be approximately \$50,000.

(9) Testimony indicates that due to the nature of the reservoir, a single injection well located as proposed will enable the applicant to efficiently carry on the proposed pressure maintenance project.

(10) The proposed pressure maintenance project should be approved.

(11) The applicant submitted data on the proposed injection well, water wells in the area, and all other wells which penetrate the zone of interest within 1/2-mile of the proposed injection well. This data shows that wells in the area are cased and plugged so as to protect fresh water and prevent fluid migration from the injection zone, and includes testimony indicating no evidence of open faults or any other hydrologic connection between the injection zone and the fresh water resources in the area.

(12) The operator should take all steps necessary to ensure that the injected gas enters only the proposed injection interval and is not permitted to escape into other formations or onto the surface from injection, production or plugged and abandoned wells.

(13) The injection of gas into the proposed injection well should be accomplished through 2 7/8 inch tubing installed in a packer set at approximately 11,275 feet; 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.

(14) Prior to commencing injection operations into the subject well, the casing should be pressure tested throughout the interval from the surface down to the proposed packer setting depth, to assure the integrity of such casing.

(15) The injection well or pressurization system should be initially equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 2700 psi.

(16) The Division Director should have the authority to administratively authorize a pressure limitation in excess of the pressure limitation described above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

(17) 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 test in order that the same may be witnessed.

(18) The proposed pressure maintenance 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.

(19) The project allowable should be equal to top unit allowable for the West Lovington-Strawn Pool (445 barrels of oil per day) times the number of developed (production or injection) proration units within the project area. Unless additional producing or injection wells are drilled within the project area, the allowable should be established at 4,895 barrels of oil per day.

(20) The transfer of allowable between wells within the project area should be permitted.

(21) The applicant further requested that the subject pressure maintenance 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).

(22) The evidence presented indicates that the subject pressure maintenance project meets all the criteria for approval.

(23) The approved "project area" should initially comprise the entire West Lovington Strawn Unit Area as described in Finding No. (3) above.

(24) 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.

(25) 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.

(26) The injection authority granted herein for the proposed injection well should terminate one year after the effective date of this order if the operator has not commenced injection operations into the well, 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, Gillespie-Crow, Inc., is hereby authorized to institute a pressure maintenance project within its West Lovington Strawn Unit Area comprising the following described area in Lea County, New Mexico, by the injection of gas into the Strawn formation, West Lovington-Strawn Pool, through the perforated interval from approximately 11,424 feet to 11,434 feet in its Speight Fee Well No. 1 located 660 feet from the North line and 2310 feet from the West line (Unit C) of Section 1, Township 16 South, Range 35 East, NMPM:

TOWNSHIP 15 SOUTH, RANGE 35 EAST, NMPM

Section 33: All
Section 34: W/2

TOWNSHIP 16 SOUTH, RANGE 35 EAST, NMPM

Section 1: Lots 1 through 8

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Section 6: Lots 3 through 5

(2) The operator shall take all steps necessary to ensure that the injected gas enters only 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.

(3) Injection shall be accomplished through 2 7/8 inch tubing installed in a packer set at approximately 11,275 feet; the casing-tubing annulus shall be filled with an inert fluid and equipped with an approved pressure gauge or attention-attracting leak detection device.

(4) The injection well or pressurization system shall be equipped with a pressure control device or acceptable substitute which will limit the surface injection pressure to no more than 2700 psi.

(5) The Division Director shall have the authority to administratively authorize a pressure limitation in excess of the above upon a showing by the operator that such higher pressure will not result in the fracturing of the injection formation or confining strata.

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

(7) The 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.

(8) 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 the injection well, the leakage of water, oil or gas from or around any producing well, or the leakage of water, oil or gas 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.

(9) The subject pressure maintenance project is hereby designated the West Lovington Strawn Unit Pressure Maintenance Project, and the operators 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.

(10) The subject pressure maintenance 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).

(11) The approved "project area" shall initially comprise the entire West Lovington Strawn Unit Area as described in Finding No. (3) above.

(12) 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.

(13) At such time as a positive production response occurs and within five years from the date of the Certificate of Qualification, the operator 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.

(14) The project allowable shall be equal to top unit allowable for the West Lovington-Strawn Pool (445 barrels of oil per day) times the number of developed (production or injection) proration units within the project area. Unless additional producing or injection wells are drilled within the project area, the allowable shall be established at 4,895 barrels of oil per day.

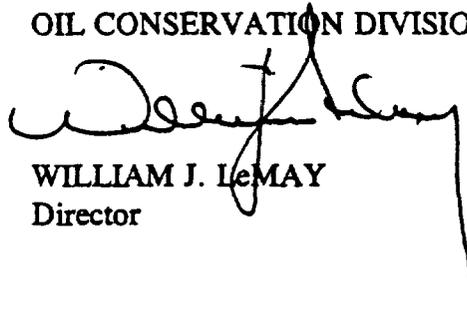
(15) The transfer of allowable between wells within the project area shall be permitted.

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

(17) 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.

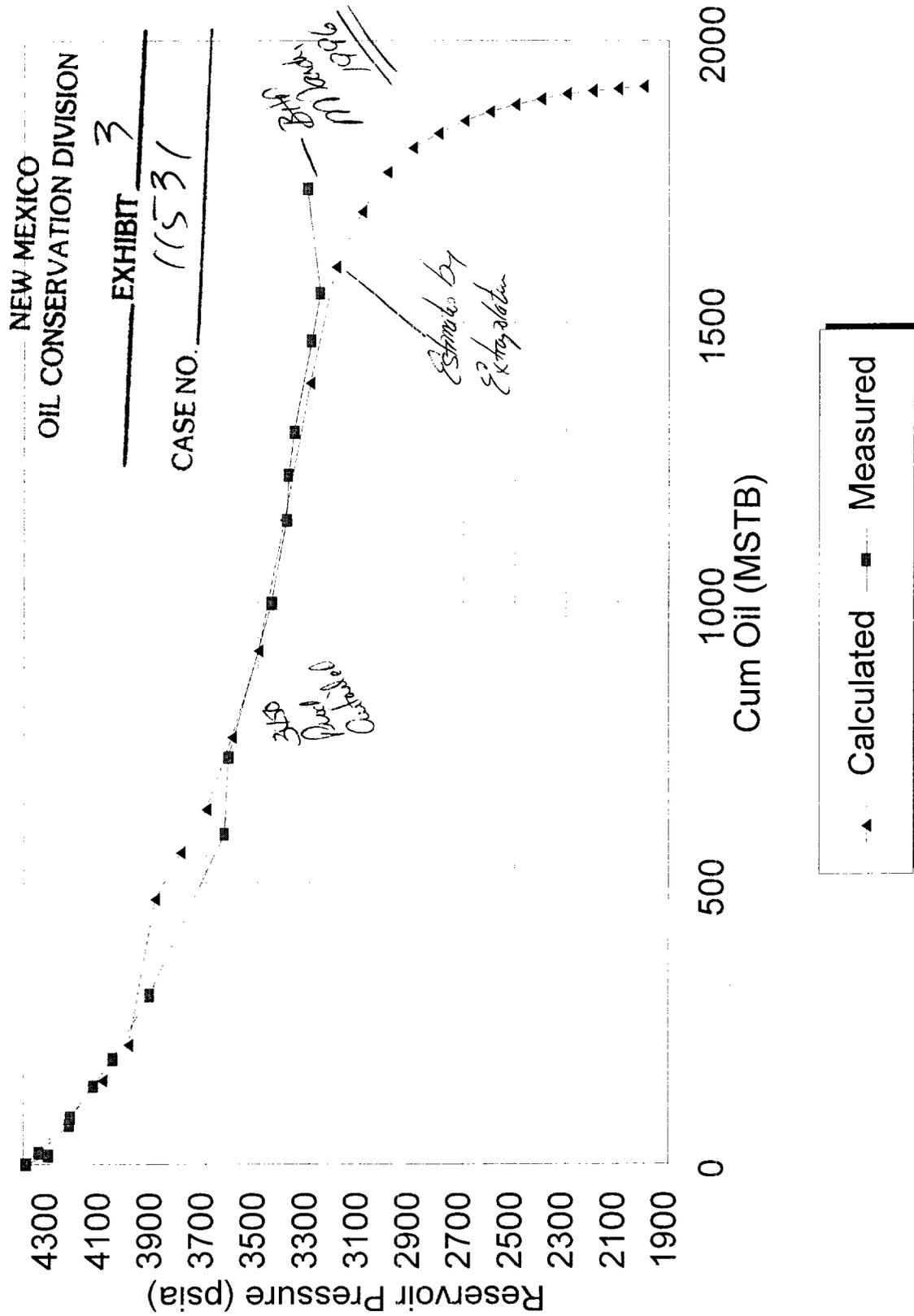
STATE OF NEW MEXICO
OIL CONSERVATION DIVISION


WILLIAM J. LEMAY
Director

fr

S E A L

West Lovington (Strawn) Field



West Lovington Strawn Unit

Lea County, New Mexico

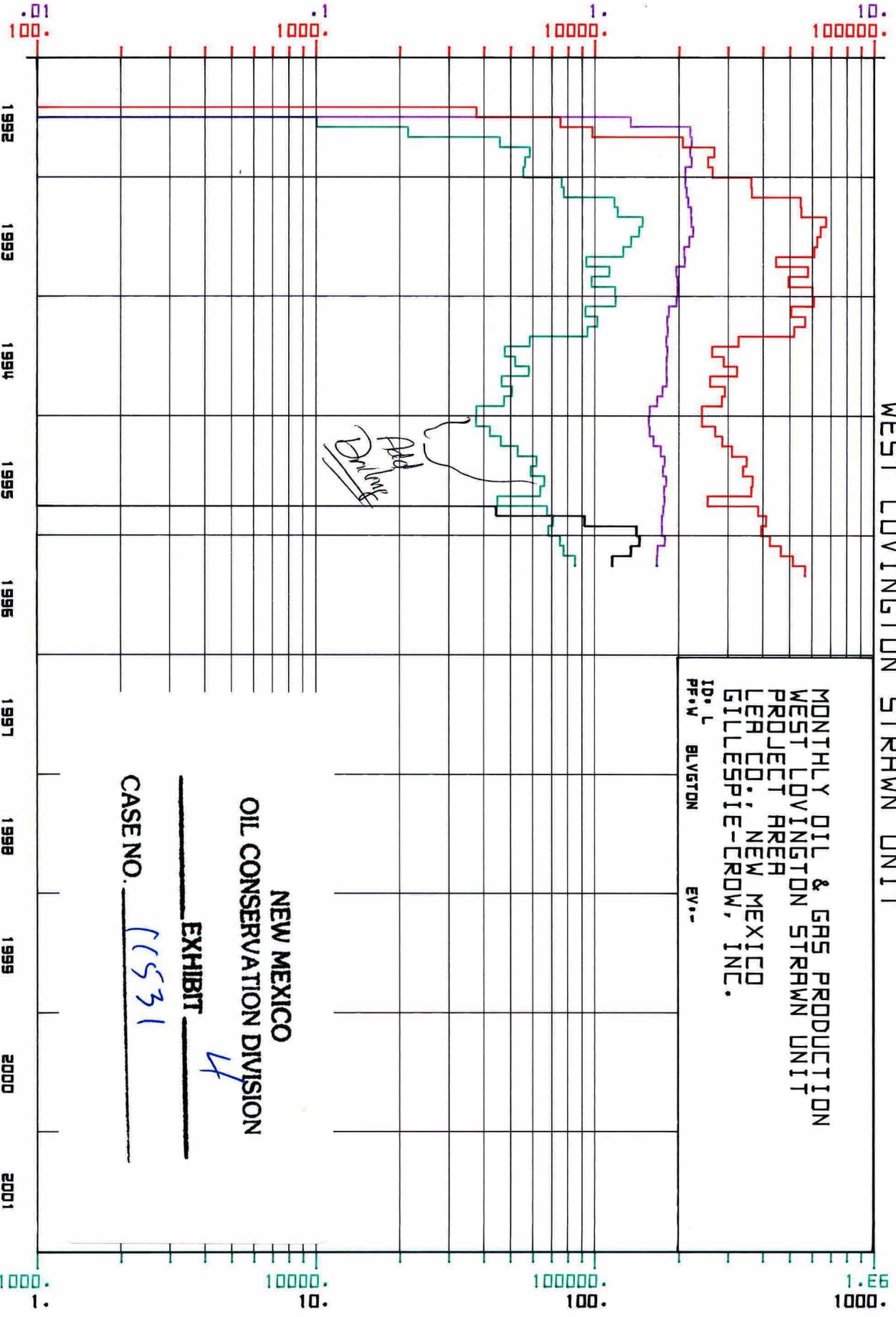
Bottom Hole Pressure vs Cumulative Production

Date	Cum Oil (BO)	Cum Gas (MCF)	Gas Injected (MCF)	Bottom Hole Pressure (PSI)
05/13/92	-0-	-0-	-0-	4392
08/12/92	16100	34600	-0-	4308
08/28/92	21400	45600	-0-	4342
11/04/92	71500	159000	-0-	4230
11/19/92	85400	187000	-0-	4224
01/18/93	141300	306600	-0-	4136
02/26/93	189900	410100	-0-	4063
04/26/93	302500	650100	-0-	3921
09/15/93	590000	2164000	-0-	3629
12/03/93	726200	1530600	-0-	3615
04/21/94	999500	2037200	-0-	3450
09/09/94	1147000	2250900	-0-	3392
12/30/94	1227900	2147000	-0-	3384
03/16/95	1304900	2567100	-0-	3363
09/18/95	1467720	2879000	-0-	3294
11/21/95	1551093	**2871088	102556	3261
03/08/96	1734823	**2651266	587537	3310

**Adjusted for Injection Volumes

WEST LOVINGTON STRAWN UNIT

MONTHLY OIL & GRS PRODUCTION
 WEST LOVINGTON STRAWN UNIT
 PROJECT AREA
 LER CO.; NEW MEXICO
 GILLESPIE-CROW, INC.
 ID# L BLVTON EV#



NEW MEXICO
 OIL CONSERVATION DIVISION
 EXHIBIT 4
 CASE NO. 11531

Oil 1995
for Oil 1995

GRS OIL PRD (BOPM)

GRS INJECTED (MCFPM)

1992 1993 1994 1995 1996 1997 1998 1999 2000 2001

WEST LOVINGTON STRAWN TOTAL FIELD PRODUCTION					
MONTH	OIL	GAS	GOR	CUM OIL	CUM GAS
1992					
January	0	0	0	0	0
February	0	0	0	0	0
March	0	0	0	0	0
April	0	0	0	0	0
May	0	0	0	0	0
June	3774	0	0	3774	0
July	8182	10177	1243	11956	10177
August	9751	21347	2189	21707	31524
September	20268	45584	2249	41965	77108
October	26959	58288	2162	68924	135396
November	26017	55951	2150	94941	191347
December	25508	55076	2159	120449	246423
TOTAL	120459	246423		120449	246423
1993					
January	35896	75880	2114	156345	322303
February	36044	77147	2140	192389	399450
March	62039	130016	2095	254428	529466
April	55471	120560	2173	309899	650026
May	66543	147811	2221	376442	797837
June	66996	143249	2203	443438	941086
July	64097	134522	2098	507535	1075608
August	61113	125870	2059	568651	1201478
September	46584	92875	1991	615235	1294273
October	56575	112431	1981	671810	1406704
November	50378	96889	1923	722188	1503593
December	60477	112800	1865	782665	1616393
TOTAL	662213	1369970		782665	1616393
1994					
January	60598	118216	1950	843263	1734609
February	50168	91886	1832	893431	1826495
March	56396	101845	1806	949827	1928340
April	51518	93711	1818	1001345	2022051
May	32512	58210	1790	1033857	2080261
June	26125	47387	1813	1059982	2127648
July	28768	51802	1800	1088750	2179450
August	32113	57588	1793	1120863	2237038
September	25644	46258	1803	1146507	2283296
October	29078	50498	1736	1175585	2333794
November	28362	47176	1663	1203947	2380970
December	23988	37493	1563	1227935	2418463
TOTAL	445270	802070		1227935	2418463

NEW MEXICO
OIL CONSERVATION DIVISION

EXHIBIT 5
CASE NO. 1153

WEST LOVINGTON STRAWN TOTAL FIELD PRODUCTION

MONTH	OIL	GAS	GOR	CUM OIL	CUM GAS
1995					
January	24,091	37,334	1,550	1,252,026	2,454,363
February	26,870	42,089	1,566	1,278,896	2,496,452
March	28,498	46,060	1,599	1,307,394	2,542,512
April	30,052	52,861	1,758	1,337,446	2,598,465
May	34,810	61,765	1,774	1,372,256	2,660,230
June	33,741	58,724	1,740	1,405,997	2,718,954
July	36,580	65,843	1,799	1,442,577	2,784,797
August	36,134	63,509	1,757	1,478,711	2,848,366
September	25,234	44,629	1,768	1,503,945	2,892,935
October	38,485	67,207	1,531	1,542,430	2,960,142
November	40,983	70,714	1,306	1,583,413	3,030,856
December	39,309	68,049	1,731	1,622,722	3,098,905
Total	394,787	681,876		1,622,722	3,098,905
1996					
January	42,269	75,064	1,775	1,664,991	3,193,969
February	46,315	77,189	1,666	1,711,306	3,251,158
March	51,108	84,788	1,659	1,762,414	3,335,946
April	56,586			1,819,000	
May					
June					
July					
August					
September					
October					
November					
December					
Total					