

5/6/96



Shell Western E&P Inc.

An affiliate of Shell Oil Company

P. O. Box 576
Houston, TX 77001

April 3, 1996

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, NM 87501

SUBJECT: REQUEST FOR EXCEPTION TO RULE 303-A - DOWNHOLE COMMINGLING
THOMAS LONG #5 - API# 30-025-10230
SECTION 11, T-22-S, R-37-E
BLINEBRY OIL & GAS (PRO-GAS) AND TUBB OIL & GAS (PRO-GAS) POOLS
DRINKARD FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

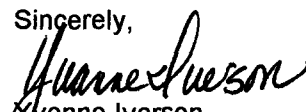
Shell Western E&P, Inc. (SWEPI) respectfully requests approval for an exception to Rule 303-A to permit downhole commingling of the Blinebry and Tubb formations in the SWEPI Thomas Long #5 well.

The Thomas Long #5 is currently completed as a dual completion in the Blinebry and Tubb formations and is producing at the rate of 11 mcf/d (flowing) from the Blinebry and 0.0 mcf/d from the Tubb. SWEPI worked over this well in 1994 (to open additional pay in the Blinebry formation) and have been unable to return this well to its pre-workover production levels of 15 mcf/d from the Blinebry and 360 mcf/d, 0.5 bopd, and 0.5 bwpd from the Tubb.

It is SWEPI's belief that artificial lift will allow the Blinebry and Tubb formations to return to their pre-workover production levels, as well as provide the mechanism to enhance oil recovery from each formation. Based upon the well's casing size of 5 1/2 inches and the marginal economic rates of the two formations, it is not feasible (mechanically or economically) to complete this well as a dual pumping well. SWEPI's only other alternative is to seek permission to commingle the two formations.

The proposed downhole commingling will allow for efficient production of the Blinebry and Tubb formations. Sucker rod lift will be installed, which will allow both the Blinebry and Tubb formations to be produced to minimum abandonment pressure, thereby preventing waste and ensuring no possibility of crossflow.

Sincerely,


Yvonne Iverson
Western Asset
Continental Division

Enclosures:

cc. State of New Mexico
Oil Conservation Division
District 1 - Hobbs Office
P. O. Box 1980
Hobbs, NM 88241-1980

Offset Operators - See attached list

LIST OF OFFSET OPERATORS

**Thomas Long - Well #5
Section 11, T22S-R37E
Lea County, New Mexico**

Ms. Mary Vargo
Amerada Hess Corporation
Onshore Production
P. O. Box 2040
Houston, TX 77252-2040

Anadarko Petroleum Corporation
P. O. Box 1330
Houston, TX 77251-1330

Arch Petroleum, Inc.
10 Desta Drive, Suite 420
Midland, TX 79705

Mr. Nathan Mouser
Chevron U.S.A. Inc.
P. O. Box 670
Hobbs, NM 88240

Mobil Producing Texas & New Mexico, Inc.
P. O. Box 633
Midland, TX 79702-0633

Oryx Energy Company
P. O. Box 2880
Dallas, TX 75221

**REQUEST FOR EXCEPTION TO RULE 303-A
DOWNHOLE COMMINGLING**

**THOMAS LONG #5
DRINKARD FIELD**

- 1) Shell Western E&P, Inc.
P. O. Box 576
Houston, TX 77001
- 2) Thomas Long #5
Unit N, 919' FSL, 1721' FWL
Section 11, T-22-S, R-37-E
Lea County, New Mexico
Commingle Zones: Blinebry
Tubb
- 3) A plat of the area is attached showing the lease and the acreage dedicated to this well for each pool. Also, a plat is attached reflecting the offset operators.
- 4) Form C-116 showing the amount of oil, gas and water produced for each zone.
- 5) Production decline curve for both zones.
- 6) Wellbore schematic.
- 7) Estimated bottom hole pressures: Tubb BHP (pressure bomb at mid-perf) = 479 psi
Blinebry Est. BHP* (at mid-perf) = 537 psi

* BHP estimated from fluid levels and surface pressures

- annular fluid level 4203' from surf
- mid-perf at 5600'
- therefore total fluid above mid-perf is 1397'
- assuming 39° API oil having 0.36 psi/ft pressure gradient
- fluid pressure at mid-perf = $0.36 \text{ psi/ft} \times 1397' = 503 \text{ psi}$
- wellbore contains 4203' of gas w/ gradient of $1 \text{ psi/1000}' = 4 \text{ psi}$
- wellbore has flowing surface pressure of 30 psi
- therefore total pressure at mid-perf = $503 + 4 + 30 = 537 \text{ psi}$

- 8) SWEPI is currently surface commingling the Blinebry and Tubb production streams and have not encountered any incompatibility problems.
- 9) Since both production streams are already being commingled at the surface, there will be no change in value of the individual production streams.
- 10) Formula for allocation of production. We recommend the allocation be based on historical cumulative production from each zone:

	Percentage of Totals					
	Gas (MCF)	Oil/Cond.(BBL)	Water(BBL)	Gas	Liq.	Water
Tubb Historical data:	5,517,332	23,132	6,418	41%	41%	57%
Blinebry Historical data:	7,902,950	33,192	4,765	59%	59%	43%

- 11) Ownership for the two pools to be commingled is common and correlative rights will not be violated.
- 12) By copy of this letter we are notifying all offset operators of the proposed commingling.

**NEW MEXICO
OIL CONSERVATION COMMISSION**

Gas Well Plat

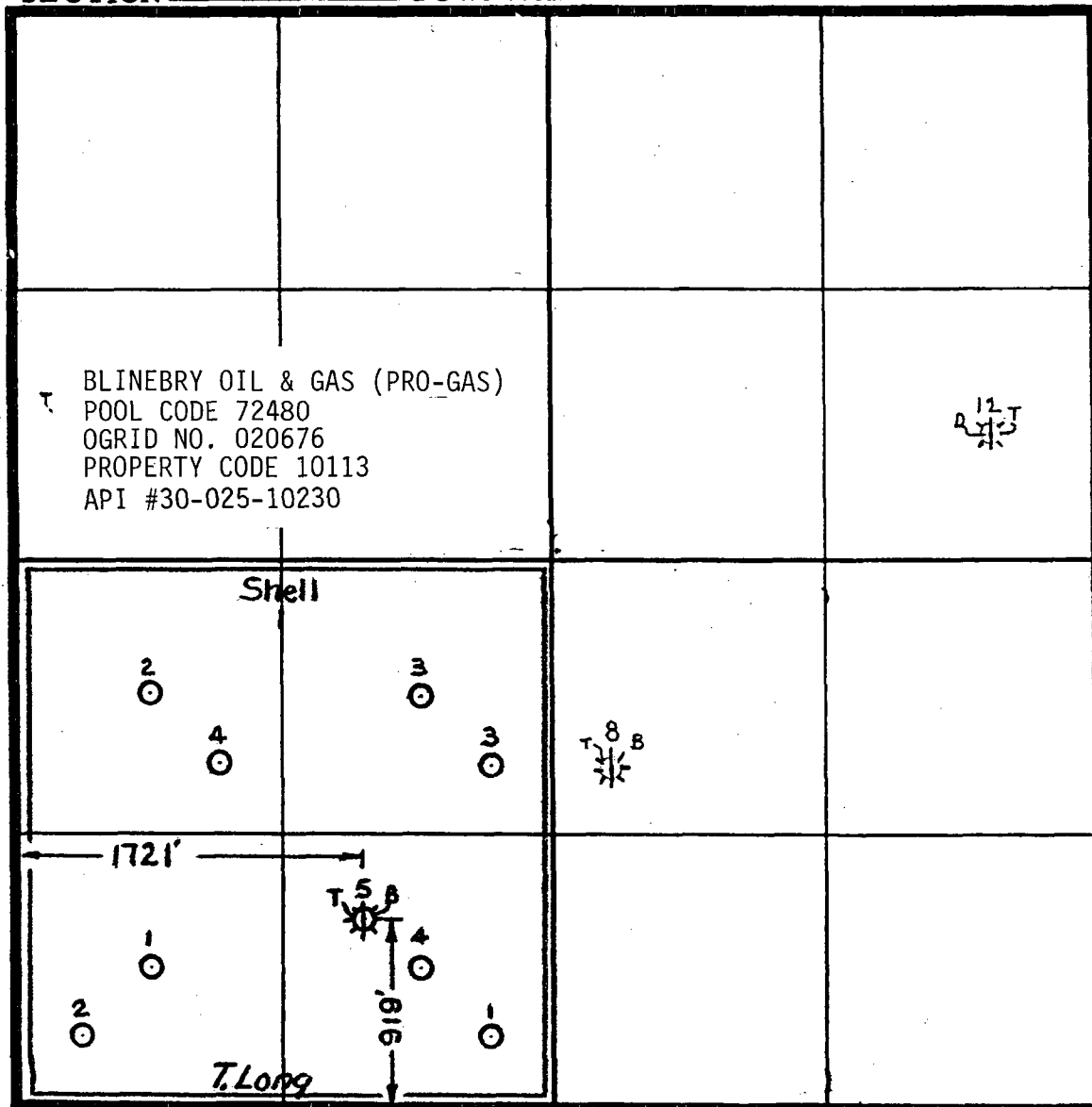
Date 8-10-54

Shell Oil Company Long 5
Operator Lease Well No.

Name of Producing Formation Blinebry Pool Blinebry

No. Acres Dedicated to the Well 160

SECTION 11 TOWNSHIP 22S RANGE 37E



I hereby certify that the information given above is true and complete to the best of my knowledge.

Name B. Nevill *B. Nevill*
Position Division Exploitation Engineer
Representing Shell Oil Company
Address Box 1957, Hobbs, New Mexico

(over)

**NEW MEXICO
OIL CONSERVATION COMMISSION**

Gas Well Plat

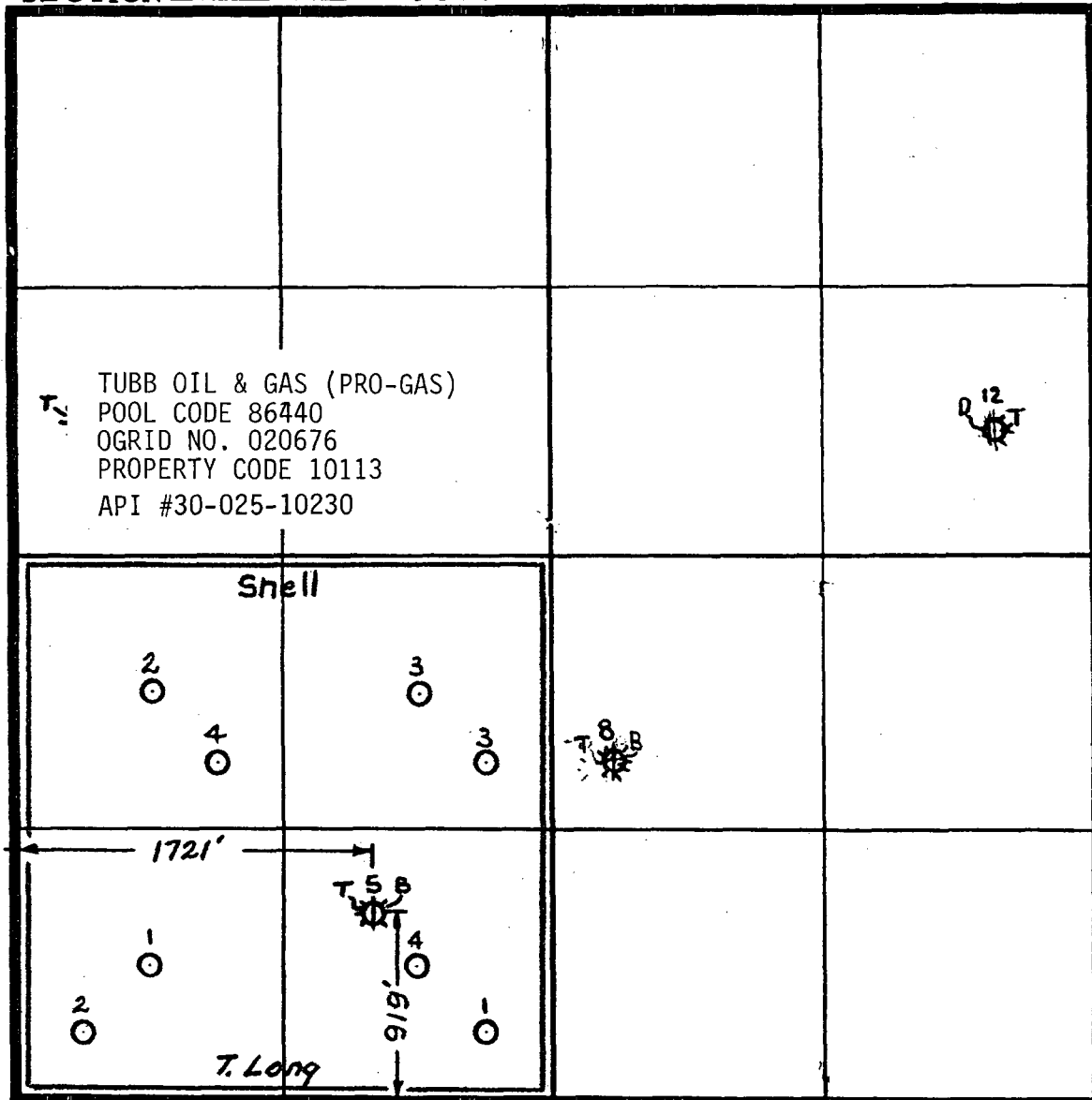
Date 8-10-54

Shell Oil Company Long 5
Operator Lease Well No.

Name of Producing Formation Tubb Pool Tubb

No. Acres Dedicated to the Well 160

SECTION 11 TOWNSHIP 22S RANGE 37E



I hereby certify that the information given above is true and complete to the best of my knowledge.

Original signed by
B. Nevill

Name B. Nevill
Position Division Exploitation Engineer
Representing Shell Oil Company
Address Box 1957, Hobbs, New Mexico

(over)

[illegible]

Submit 2 copies to Appropriate District Office.
DISTRICT I
P.O. Box 1980, Hobbs, NM 88240
DISTRICT II
P.O. Drawer DD, Artesia, NM 88210
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department
OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-116
Revised 1/1/89

GAS - OIL RATIO TEST

Operator		Pool		County											
SHELL WESTERN E & P INC.		BLINEBRY (PRO GAS) / TUBBS (PRO GAS)		LEA CNTY - NEW MEXICO											
Address P.O. BOX 4772 HOUSTON, TX 77210-4772		TYPE OF TEST - (X)		Completion ☐ Special ☒											
LEASE NAME	WELL NO.	LOCATION				DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU FT/BBL.
		U	S	T	R							WATER BBL.	GRAV. OIL	GAS MCF.	
THOMAS LONG (BLINEBRY)	5	N	11	22S	37E	02/04/96	P		40.0	M	24	0		0	11.0
THOMAS LONG (TUBBS)	5	N	11	22S	37E	(NO TEST DATA AVAILABLE)	WELL SHUT-IN								

Instructions:

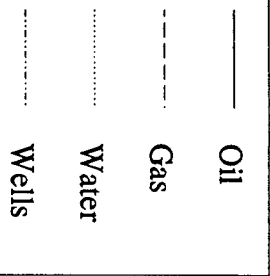
During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Division.
Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F.
Specific gravity base will be 0.60.
Report casing pressure in lieu of tubing pressure for any well producing through casing.
(See Rule 301, Rule 1116 & appropriate pool rules.)

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Signature Kathleen Subramanian for:

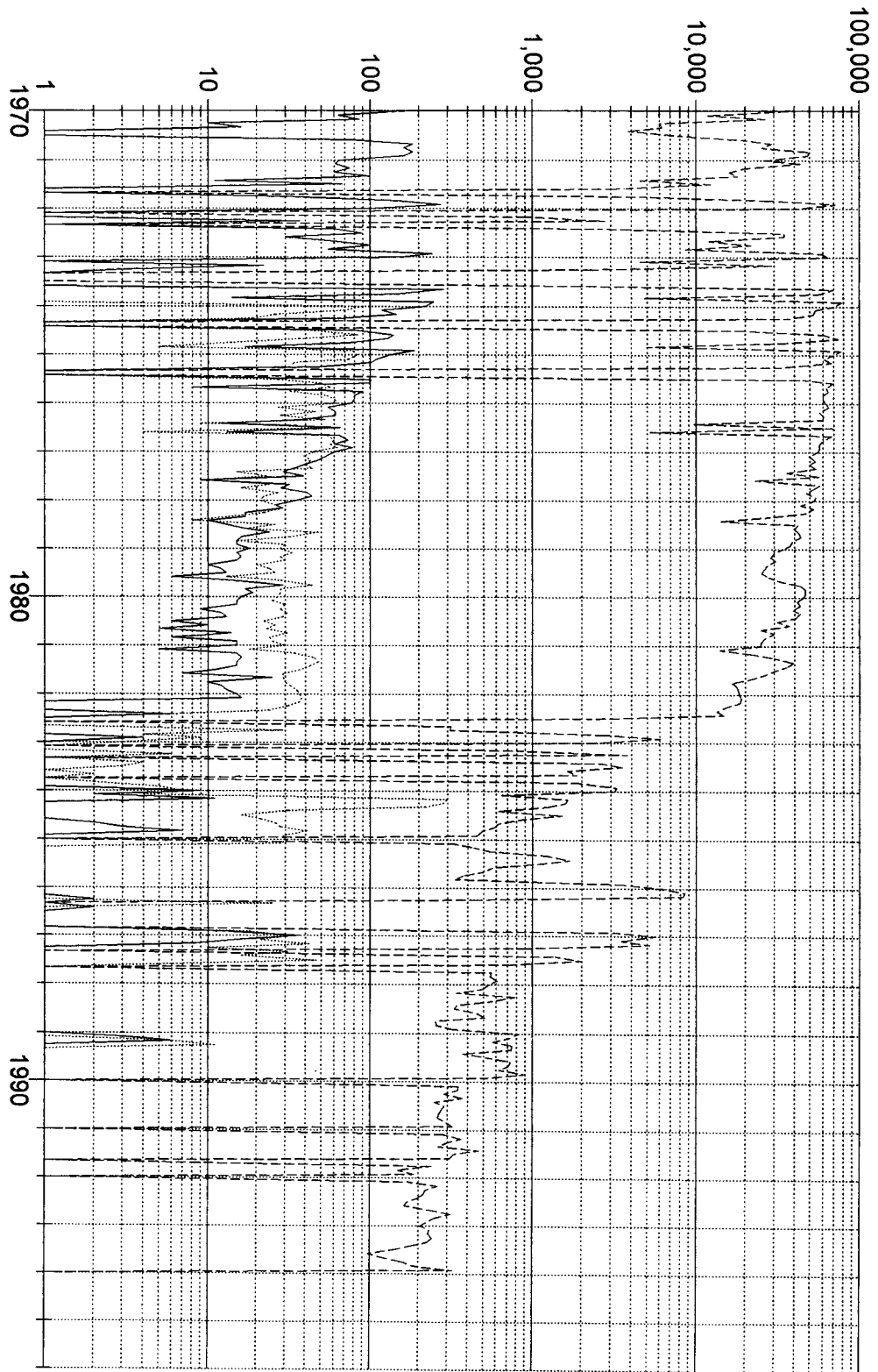
D.J. VIAI - PROCESS TEAM LEADER

Printed name and title
April 2, 1996 (713) 544-3343
Date Telephone No.



Field: BLINEBRY OIL AND GAS
 Lease: THOMAS LONG | Well Number: 5
 Operator: SHELL WESTERN E & P INCORPORATED
 Production Rate vs Time
 For the Period 01/1970 to 12/1993

BBf/Mo or
 Mcf/Mo



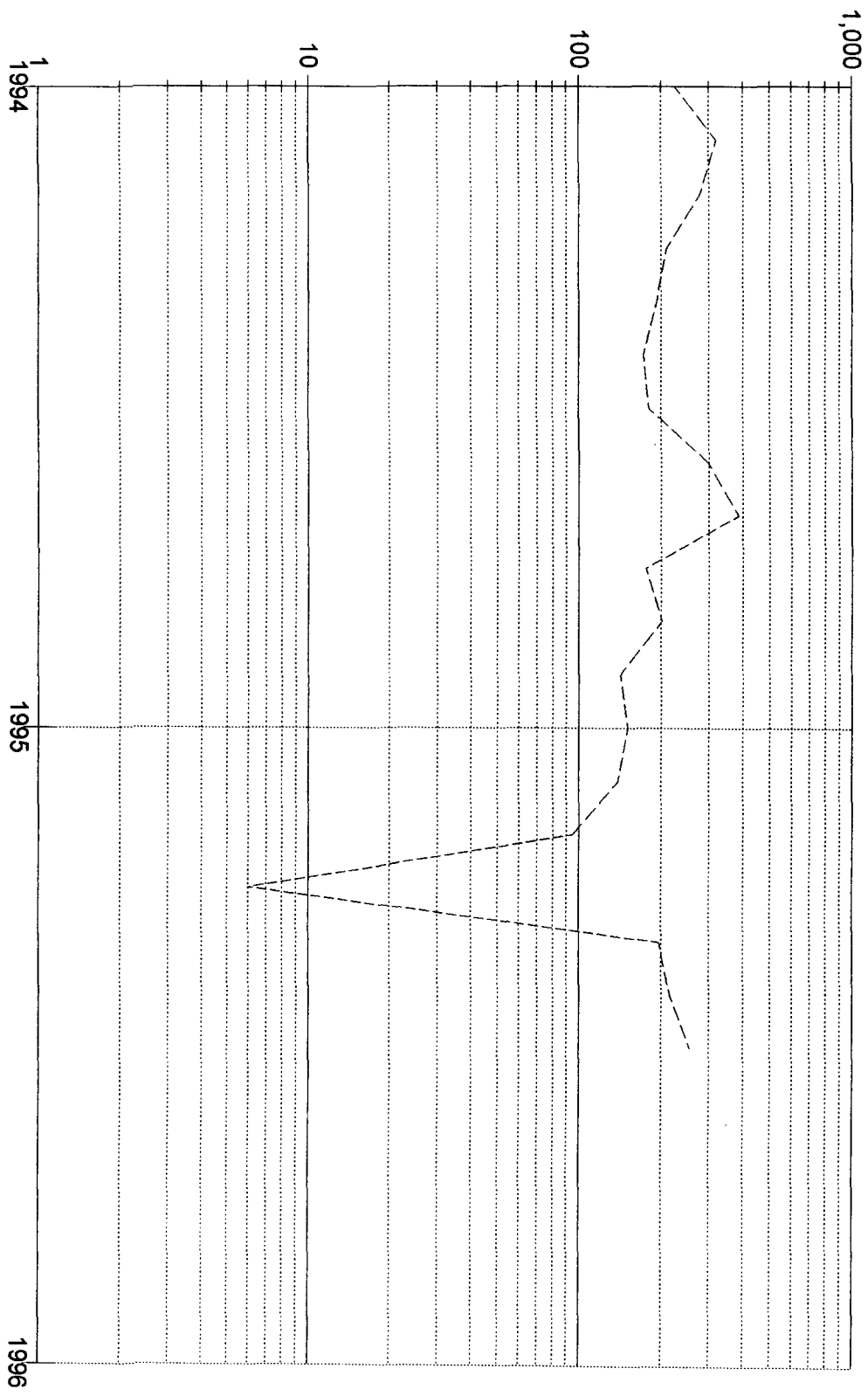
Reported Oil Production = 33,192 Bbls
 Reported Gas Production = 7,900,166 Mcf
 Reported Water Production = 4,765 Bbls

Time

Oil
Gas
Water
Wells

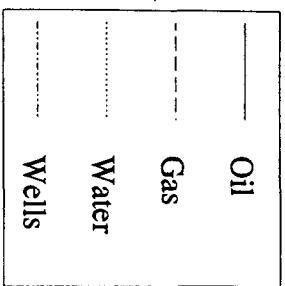
Field: BLINEBRY
 Lease: THOMAS LONG | Well Number: 5
 Operator: SHELL WESTERN E & P INCORPORATED
 Production Rate vs Time
 For the Period 01/1994 to 07/1995

BBf/Mo or
 Mcf/Mo



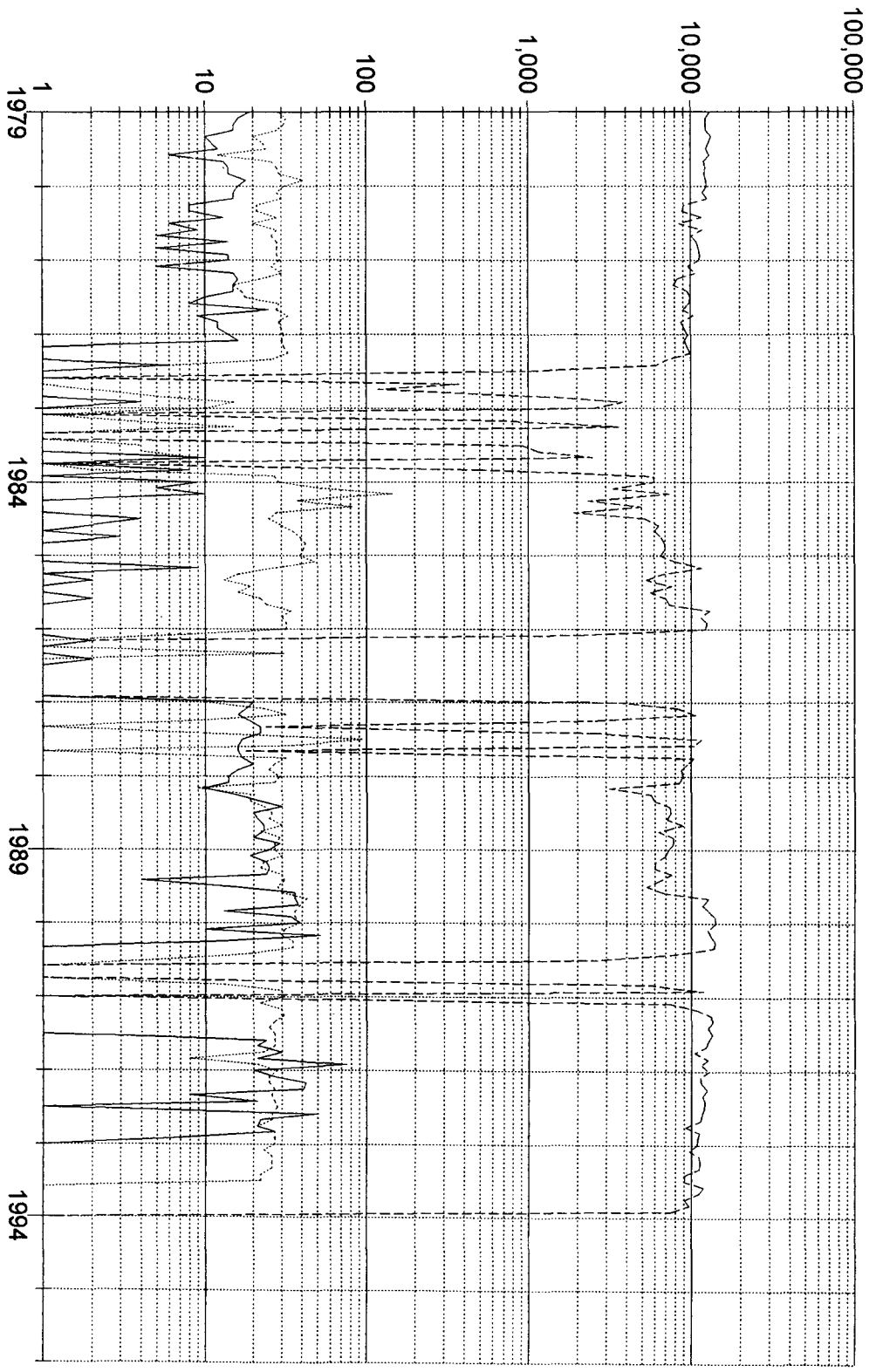
Reported Oil Production = 33,192 Bbls
 Reported Gas Production = 7,904,007 Mcf
 Reported Water Production = 4,765 Bbls

Time



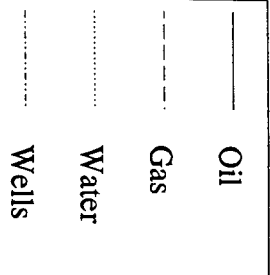
Field: TUBB OIL AND GAS
 Lease: THOMAS LONG | Well Number: 5
 Operator: SHELL WESTERN E & P INCORPORATED
 Production Rate vs Time
 For the Period 07/1973 to 12/1993

BB/Mo or
 Mcf/Mo



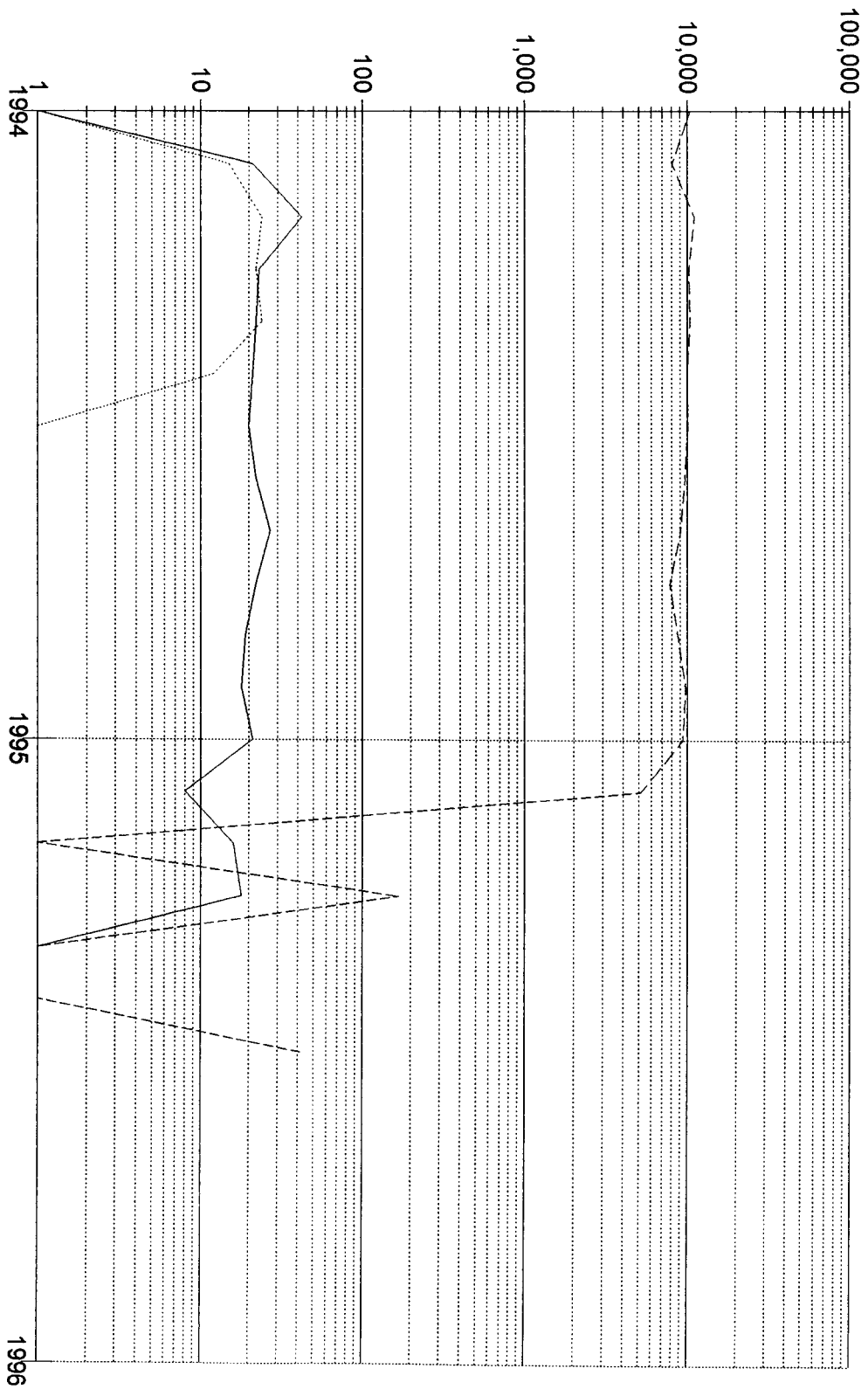
Time

Reported Oil Production = 22,875 Bbls
 Reported Gas Production = 5,402,072 Mcf
 Reported Water Production = 6,321 Bbls



Field: TUBB
 Lease: THOMAS LONG | Well Number: 5
 Operator: SHELL WESTERN E & P INCORPORATED
 Production Rate vs Time
 For the Period 01/1994 to 07/1995

BBf/Mo or
 Mcf/Mo



Reported Oil Production = 23,195 Bbls
 Reported Gas Production = 5,532,058 Mcf
 Reported Water Production = 6,418 Bbls

Time

Well Schematic

Page 1 of 2

Thomas Long Well # 6

6" x 800 Hanger Flange
DFC 13" above Ground Level
Guy Anchors Tested 940509

Last Updated: mm-dd-yy

Cog Size: 13 3/8"
W.L.: 48#
Depth: 302

STATUS AS OF 03/12/96:

Blinebry: 0BOPD + 0BWPD + 4MCFGPD
Tubb: 0BOPD + 0BWPD + 0MCFGPD

Cog Size: 8 5/8"
W.L.: 32#
Depth: 2902

3576-3701 Cog Leaks Spzd w/300 ax Cmt 08/88

5405-90 4jspf 08/02/54 Blinebry 1

5510-90 4jspf 08/02/54 Blinebry 2

5610-36 1jspf 03/01/95 Blinebry 3

5644-90 1jspf 03/01/95 Blinebry 4

5704-30 1jspf 03/01/95 Blinebry 4

@5881 Baker Lockset Pkr w/1.78 profile nipple

5909-36 1jspf 08/02/54

5965 1jspf 08/02/54

to
6070

@6080 remains of Baker Mdt D Pkr

Cog Size: 5 1/2"
W.L.: 15.5#
Depth: 6099

T.D.= 6100

Thomas Long Lease, Lea County, New Mexico Zone Ctrl#: 23371(T) & 23372(Bli)

Well API # 30-025-10230

Well Type: Oil: ☐Gas: ☒Wtr Inj: ☐

Other:

Lease Type -

FED ☐STATE ☐ FEE ☒

State Oil & Gas Lease No.:

Unit Letter: N,

919 FSL,

1721 FWL Section:

11,

T22S, R37E, NMPM

T.D.= 6100

Datum=

3362 (KB)

GL= 3349

D.F.C.= 13

(A.G.L.)

P.B.T.D.= 6080

Jts Tbg=

198

Pkr @ 5861

Csg Size	Weight	Depth	Sx Cmt	T.O.C.	Method	Zone	Log Top	SubSea
13 3/8"	48#	302	300	surf		Glorieta	5000	1638
8 5/8"	32#	2902	1490	surf		Paddock	5060	1698
5 1/2"	15.5#	8099	400			Blinbry	5435	2073
						Tubb	5920	2558

Logged: Company Type(s) Interval

540730 SWLS SP/R 2803-6102

850228 SWLS CN/GR/CCL 0200-8007

Morning Report Summaries

Date	Pay(s)	TopPerf>BtmPerf	Before/After Test=O+W+G	Work Description
540802	Tubb	5909>6070	[new/23,900MCF]	perf 5909-36, 5965-6070 w/4)spf
540803	Tubb			& treat w/750gMA +10,000g GeoFrac+ 1#/g sd
540805	Blinbry	5405>5590	[new/14,700MCF]	perf 5405-90 & 5510-90 w/4)spf
540806	Blinbry			& treat w/750g MA +10,000 GeoFrac +1#/g sd
660610		3516>3701		Csg Leak squeezed to 1000psig w/300sx cmt, after workover well flowing 343bopd +4bwpd on 32/64" choke
950301	Blinbry	5610>5730	[0+0+15(Bli) & 0.5+0.5+380(Tubb)]	
950302	Blinbry	Perf 5610-36, 5644-90, & 5704-30	1)spf, & A T 5704-30 w/ 1800g 20%HCl + 41 RCNBS, Max 1900psig, Avg 1650psig, Avg 2.8bpm, ISIP 1000psig, A T 5644-90 W/3150G 20%HCl + 70 RCNBS Max 1780psig, Avg 70psig, Avg 3bpm, ISIP Vac, A T 5610-36 w/1800g 20%HCl + 40 RCNBS, Max 60psig, Avg 40psig, Avg 2.9bpm, ISIP Vac, A T 5510-90 w/2700 20%HCl + 1000# R S, no block action, Max 20psig, Avg 20psig, Avg 2bpm, ISIP Vac, A T 5405-90 w/1500g 20%HCl + 600# R S, 800psig block action, Max 300psig, avg 1.3bpm, ISIP Vac.	