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New Mexico
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-140
Originated 11/1/97

Submit Original
Plus 2 Copies
to appropriate
District Office

C-0371

APPLICATION FOR
QUALIFICATION OF WELL WORKOVER PROJECT
AND CERTIFICATION OF APPROVAL

THREE COPIES OF THIS APPLICATION AND ALL ATTACHMENTS MUST BE FILED WITH THE APPROPRIATE DISTRICT OFFICE OF THE OIL CONSERVATION DIVISION.

- I. Operator: Santa Fe Energy Resources, Inc. OGRID #: 020305
Address: 550 W. Texas, Suite 1330, Midland, Texas 79701
Contact Party: Gary Travis Phone: 915/687-3551
- II. Name of Well: Mesa Verde "6" Federal #14 API #: 30-025-32753
Location of Well: Unit Letter C, 330 Feet from the north line and 1650 feet from the west line.
Section 6, Township 24S, Range 32E, NMPM, Lea County
- III. Date Workover Procedures Commenced: December 5, 1996
Date Workover Procedures were Completed: January 4, 1997
- IV. Attach a description of the Workover Procedures undertaken to increase the production from the Well.
- V. Attach an estimate of the production rate of the Well (a production decline curve or other acceptable method, and table showing monthly oil and/or gas Project Production based on at least twelve (12) months of established production which shows the future rate of production based on well performance prior to performing Workover.)
- VI. Pool(s) on which Production Projection is based:
Mesa Verde Delaware
Mesa Verde Bone Spring
- VII. AFFIDAVIT:
State of Texas)
County of Midland) ss.

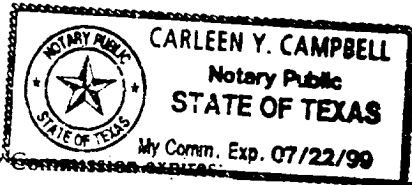
Gary Travis, being first duly sworn, upon oath states:

1. I am the Operator or authorized representative of the Operator of the above referenced Well.
2. I have made, or caused to be made, a diligent search of the production records which are reasonably available and contain information relevant to the production history of this Well.
3. To the best of my knowledge, the data used to prepare the Production Projection for this Well is complete and accurate and this projection was prepared using sound petroleum engineering principles.

(Name)

Sr. Reservoir/Evaluations Engineer
(Title)

SUBSCRIBED AND SWORN TO before me this 28 day of Aug., 1997



Notary Public

Carleen Y. Campbell

7-22-99

FOR OIL CONSERVATION DIVISION USE ONLY:

VIII. CERTIFICATION OF APPROVAL:

This Application for Qualification of Well Workover Project is hereby approved and the above referenced Well is designated as a Well Workover Project pursuant to the "Natural Gas and Crude Oil Production Incentive Act" (Laws 1995, Chapter 15, Sections 1 through 8). The Oil Conservation Division hereby verifies the Production Projection for the Well Workover Project attached to this application. By copy of this Application and Certification of Approval, the Division notifies the Secretary of the Taxation and Revenue Department of this Approval and certifies that this Well Workover Project has been completed as of 1-4-97, 1997.

Paul J. Kautz
District Supervisor, District 1
Oil Conservation Division

Date: 10/3/97

IX. DATE OF NOTIFICATION TO THE SECRETARY OF THE TAXATION AND REVENUE DEPARTMENT.

DATE: _____

WORKOVER PROCEDURE

MESA VERDE "6" FEDERAL #14 DELAWARE LOWER BRUSHY CANYON COMPLETION

The Mesa Verde "6" Federal #14 was originally completed in the Bone Spring (8570-8585') in April, 1995. In December, 1996 the Bone Spring was temporarily abandoned and the Delaware Lower Brushy Canyon was completed. The following is an outline of the completion procedure.

1. Rig-up workover unit. Pull out of hole with rods and tubing.
2. Perforate the Lower Brushy Canyon from 8364-8402'.
3. Trip in hole with RBP, pkr and tubing. Set RBP at 8500' and test. Set pkr at 8290'.
4. Break down perms with 2 bbl of acid. Re-acidize with 2000 gal. of acid. Swab back and evaluate.
5. Fracture stimulate and swab/flow back load.
6. Place well on pump.
7. Apply for commingling approval once production has stabilized.

**DELAWARE "XY" SAND ADDITION
MESA VERDE "6" FED #14
AFE # 296329**

OBJECTIVE: Delaware "Lower Brushy Canyon XY" Sand Addition.

DIRECTIONS: From Hwy 128, between MM 18 & 19, turn north at white cattleguard onto lease road. Continue N/E for 1 mile and turn left and go .5 mile to the location.

WELL DATA:

Reference elevation: KB 3566.7' (16.7' AGL)

Correlation log: Halliburton CNL-GR (1/17/95)

Casing: 11 3/4" 42# H-40 @ 592' cmt'd w/425 sx Cl C to surf
8 5/8" 32# K-55 @ 4429' cmt'd w/1175 sx PSL C to surf
5 1/2" 15.5# J-55 & 17# N-80 @ 8,728' cmt'd w/440 sx PSL C + 360 sx Cl
H. (15.5# from 1687-5483')
TOC @ 3700' by TS.

Tubing: 2 7/8" 6.5# J-55 tbg @ 8623'.

Rods: 6-1", 153-3/4", 100-7/8", & 89-1" Gr. D rods w/2 1/2" x 1 1/4" x 22' pump

TD: 8,728'.

PBTD: 8,687'.

Current Perfs: 8570-85'.

PROCEDURE

1. MIRU PU. POOH w/rods & pump.
2. ND WH & NU BOP.
3. Rel TA & POOH w/2 7/8" 6.5# J-55 tbg.
4. RU WL & RIH w/4" csg gun & perf ~~2~~ SPF from **8364-8402'** (39 shots, 120° phased).
RD WL.
5. RIH w/RBP, RTTS, & 2 7/8" tbg to 8560'. Set RBP. Load hole w/formation water, set RTTS, & test RBP to 2000 psi.
6. Rel RTTS & PU to 8400'.

7. MIRU DS. Spot 2 bbls 7.5% NEFE across perfs. PU to 8350'. Set RTTS & estab PIR w/2% KCl. Circ acid to pkr and acidize zone w/2000 gals 7.5% NEFE at 3-5 BPM dropping 59 1.3 sg ball sealers evenly spaced. SD & record 15 min SIP.
8. RU swab and swab back load.
9. Release RTTS, RIH thru perfs to clear balls, & POOH w/tbg & pkr.
10. RIH w/SN & 2 7/8" tbg to 8300'. NU frac valve.
11. Frac down tbg @ 20 BPM w/16/30 Ottawa as per DS recommendation. Flush to top perf w/2% KCl. Max pressure 3500 psi on csg, 7000 psi on tbg.
12. Record ISIP and flow well back immediately at 20 GPM to closure. RD DS. Continue flowing back to tank at 1 BPM until well dies.
13. When well dies, ND frac valve & RIH to 8560' to check for fill. Reverse out any sand. POOH w/tbg.
14. RIH w/1 jt tbg, SN, 3 jts tbg, TA, and 2 7/8" tbg to 8300'. Set TA. ND BOP & NU WH.
15. RIH w/sand screen, 2½" x 1½" x 26' RHBC pump, 151-3/4", 88-7/8", & 88-1" Gr. D rods. Space out and hang well on @ 13x100" SPM. RDMC PU.
16. Evaluate for commingling the Bone Spring at a later date.

"TIGHT HOLE"	SFE WI	: 100	% BPO	Re-completion	
SFER, INC.	SFE WI	: 100	% APO	Rig:	Pride
<u>Mesa Verde "6" Fed. #14 (D)</u>	SFE NRI	: 87.5	% BPO	Spud:	1/04/95
330' FNL & 1650' FWL	SFE NRI	: 87.5	% APO	11-3/4"	@ 592'
Sec 6, T-24S, R-32E	SFE ORRI	: N/A	% BPO	8-5/8"	@ 4,429'
Lea Co., NM	SFE ORRI	: N/A	% APO	5-1/2"	@ 8,728'
TD: 8728'	SFE WI	: N/A	% BCP	Perfs:	8570-858
PBTD: 8687'	SFE WI	: N/A	% ACP		
	SFE ACT	: 4876-014			
	SFE AFE	: 296329			
	AFE COMP	: \$90,000			
	DHC COST	: N/A			

Objective: Delaware "Lower Brushy Canyon XY" Sand Addition

12/04/96
MIRU, left well pumping.
CTD: \$496

Objective: Delaware "Lower Brushy Canyon XY" Sand Addition

12/05/96
Well on prod, kill well w/prod wtr, POOH w/rods & pmp. ND WH, NU BOP, rel TAC, POOH w/264 jts, LD BHA. RIH w/20 stds. SDFD.
CTD: \$2,709

Objective: Delaware "Lower Brushy Canyon XY" Sand Addition

12/06/96
SITP 50. Kill well, POOH w/kill string. MIRU WL, RIH w/CCL-4" csg guns, 1 SPF, 120° phasing, perf Delaware LBC 8364-8402', no resp, POOH. RIH w/RBP & Uni V pkr, 266 jts 2-7/8" J-55 tbg, set RBP @ 8500', test to 2000 PSI. Spot 2 bbl acid across perf, pulled 4 jts tbg, rev 5 bbl, set pkr @ 8290', break perf dwn w/1780 PSI. Establ pump-in rate 5 BPM @ 2200 PSI. 5 min SI 606 PSI. Open bypass, spot 2000 gal 7½% NeFe acid w/59 1.3 SG BS 4 bbl above pkr, closed bypass, press csg to 500 PSI, acdz Delaware. Max TP 2200 PSI; Avg TP 1500 PSI. Max BPM 5. Slight ball action, did not ball out. ISIP 50, 5 min SI TPSI 0. TLBTR 105. SWI, SDFN.
CTD: \$10,121

Objective: Delaware "Lower Brushy Canyon XY" Sand Addition

12/07/96
SITP 0. RIH w/swab. IFL 1500'. Made 8 runs, rec 40 BW. Tbg swab dwn, wait 1 hr between last 5 runs, last 5 runs had 150' fluid entry w/slight trace oil, no gas. Made total 14 runs, rec 43.5 BW. FFL - seat nipple. TBLLTR = 61.5. SWI, SDFN.
CTD: \$12,035

12/08/96
IFL 7500'. Made 2 runs to SN, rec 5 bbl total. Rel pkr, knock balls off perf, POOH w/tbg. RIH w/notched collar, SN & 259 jts tbg. EOT 8282, BLLTR 59. NU frac valve. SWI til Monday.
CTD: \$14,212

"TIGHT HOLE"	SFE WI	: 100	% BPO	Re-completion	
SFER, INC.	SFE WI	: 100	% APO	Rig:	Pride
<u>Mesa Verde "6" Fed. #14 (D)</u>	SFE NRI	: 87.5	% BPO	Spud:	1/04/95
330' FNL & 1650' FWL	SFE NRI	: 87.5	% APO	11-3/4"	@ 592'
Sec 6, T-24S, R-32E	SFE ORRI	: N/A	% BPO	8-5/8"	@ 4,429'
Lea Co., NM	SFE ORRI	: N/A	% APO	5-1/2"	@ 8,728'
TD: 8728'	SFE WI	: N/A	% BCP	Perfs:	8570-858
PBTD: 8687'	SFE WI	: N/A	% ACP		
	SFE ACT	: 4876-014			
	SFE AFE	: 296329			
	AFE COMP	: \$90,000			
	DHC COST	: N/A			

12/10/96

MIRU Dowell, frac dwn tbg @ 20 BPM w/16/30 Ottawa sand. Test lines to 7000 PSI, SITP 35 PSI, load hole w/54 bbl. Start pad w/cross link.

..pmp 286 bbl for pad,
 ..pmp 26 bbl w/2 PPG 16/30 Ottawa sand,
 ..pmp 27 bbl w/3 PPG,
 ..pmp 112 bbl w/4 PPG,
 ..pmp 117 bbl w/5 PPG,
 ..pmp 151 bbl w/6 PPG,
 ..pmp 188 bbl w/7 PPG.

Pmp 11 bbl of stage seven w/919 bbl slurry & 112,938# sand pmpd, tbg PSI dropped f/5841-2907 PSI; csg PSI incr f/760-1295 PSI. Cont pmpg, pmp 222 bbl slurry & 52,284# sand; tbg PSI 2596; csg PSI 2930. SD. Flow well back 1/2 BPM for 9 mins, rec est 8 bbl. SWI, rev tbg w/5 bbl @ 143 PSI, pmp in PSI, tbg cleaned up. PU on tbg, tbg weighed 46 pts. POOH w/38 jts tbg, 39th jt had hole 14' from top. Fin POOH, change out drlg line. SWI, SDFD. Max TP 5865; Avg TP 5000. Total slurry pmpd 1141 bbl. Total sand pmpd 166,224#. TBLTR 1317.
 CTD: \$57,533

12/11/96

MIRU kill truck, pmp 29 bbl dwn 8-5/8" csg, brk circ, pmp total 60 bbl @ 2 BPM, 90 PSI. Rec gel wtr & 2% KCl wtr. RIH w/1 jt tbg, RBP & 134 jts. Attempt to set RBP, would not set, worked tbg, would not set. Tag fill @ 6775', POOH. SWI, SDFD.
 CTD: \$60,550

12/12/96

RIH w/tbg, open-ended, to 2423', circ hole w/70 bbl 2%, POOH. RIH w/RBP & pkr to 1992', set RBP, test to 500 PSI, ok. Set pkr @ 1296', test ok, set pkr @ 1206', pmp 5 bbl, circ to surf out 8-5/8", load 5 1/2" above pkr, test ok, POOH. ND BOP, ND 5 1/2x8-5/8" spool, fish 5 1/2" csg, dump sand on top of RBP, back csg off @ 1265', POOH to collar, set csg slips. SDFD. TBLTR 1317.
 CTD: \$67,774

12/13/96

POOH w/30 jts 5 1/2" N-80 LT&C csg, 5 pins bad, 8 collars bad, 1" of starter threads bad on all 30 jts. WO new csg. Appears csg was over torque when run, back off joint threads looked good. SDFD. TBLTR 1317.
 CTD: \$70,181

12/14/96

RIH w/30 jts 5½" N-80, 17# csg, tag pick up. NU spool & BOP. Circ 53 BO dwn 8-5/8" csg. Screw 5½" csg together, PU on csg, pull 80,000#, load, test 5 ½" to 1500#, ok. Test 8-5/8" to 500#, ok. SDFD. TBLTR 1317.
CTD: \$75,703

12/15/96
ND BOP & spool. Set csg slips w/80,000#, cut csg off. NU WH spool, test to 2900#, ok. NU BOP. RIH with O/O tool, circ sand off top of RBP, rel RBP. POOH w/2 stds, test csg to 1000#, ok. POOH. LD BHA. RIH w/bull dog bailer, circ valve & 60 jts tbg. SDFD. TBLTR 1317.
CTD: \$78,720

12/16/96 SD.

12/17/96
RIH w/tbg, tag fill @ 5970', POOH, LD 68 jts. RIH w/tbg, circ sand to 6033'. POOH w/2 stds. SWI. SDFD. TBLTR 1317.
CTD: \$82,419

12/18/96
RIH w/tbg, tag fill @ 6033'. Circ sand to 7220', POOH w/4 jts. SDFD. TBLTR 1317.
DC: \$85,567

12/19/96
RIH w/tbg, tag fill @ 7220'. Circ sand to 8347', POOH w/4 jts. SDFD. TBLTR 1317.
CTD: \$88,715

12/20/96
RIH w/tbg, tag fill @ 8347'. Bailed sand to 8470', POOH w/tbg & BHA. RIH w/NC, SN, 4 jts TAC, 255 jts tbg, EOT 8385'. Set TAC, RU swab. IFL 500'. Made 12 runs, rec 56 bbl. FFL 1700'. SDFD. TBLTR 1261.
CTD: \$91,766

12/21/96
TP = TLTM. CP 0. Swab well. IFL 1500'. Made 40 runs, rec 126 BW, 0 BO. Load sand-cut. FFL 2400'. SDFD. TBLTR 1135.
CTD: \$93,769

12/22/96
TP = TLTM. CP = TLTM. Swab well. IFL 1700'. Made 39 runs, rec 144 BW, 0 BO. Load sand-cut. FFL 2900. SDFD. TBLTR 991.
CTD: \$95,772

12/23/96 SD.

12/24/96
Tbg 0#. IFL 1900'. Made 40 swab runs, rec 150 bbl load wtr. FFL 3100'. Last run sample = 99% water, 1% sand. TBLTR 841. SD til Thursday.
CTD: \$97,641

12/25-26/96 SD til Thursday.

12/27/96

SITP 0#. IFL 1900'. Made 45 swab runs, rec 147 bbl load wtr. FFL 3100'. Still lifting sand. BLLTR 694

CTD: \$99,878

12/28/96

SITP 0#. IFL 2100'. Made 33 swab runs, rec 130 bbl load water. Last run sample = 1% oil cut, still lifting sand. SWI, SDFN. BLLTR = 564 bbl.

CTD: \$101,747

12/29/96

SITP 100#; Casing 20#. Made 36 swab runs, rec 147 bbl w/1% oil cut w/sand. IFL 2400'; EFL 3300'. BLLTR 417. SWI.

CTD: \$103,616

12/30/96 Well SI.

12/31/96

Tag sand @ 8385'. POOH w/tbg, PU bailer, bail sand to 8492', POOH w/bailer. RIH w/NC, SN, 4 jts tbg, TAC, & 20 stds tbg. SWI, SDFN.

CTD: \$106,731

1/01/97

RIH w/tbg. Attempt to run pmp, found swaged pin 250' from surface. POOH w/8 jts tbg. Change out bad jt, RIH w/tbg. ND BOP, NU WH. SWI, SDFN.

CTD: \$108,254

1/02/97 SD Wednesday.

1/03/97

RIH w/2½"x1½" pmp, (150) 3/4" rods, (88) 7/8" rods, (89) 1" rods. Space & hang pmp. Load & test, rig dwn.

CTD: \$110,690

1/04/97 Well on production.

1/03/97 24 hr prod: 105 Gas, 16 BO, 3 BW, 180 FTP.

1/04/97 24 hr prod: 102 Gas, 15 BO, 3 BW, 180 FTP.

1/05/97 24 hr prod: 108 Gas, 14 BO, 4 BW, 180 FTP.

1/06/97 24 hr prod: 107 Gas, 12 BO, 3 BW, 180 FTP.

1/07/97 24 hr prod: 103 Gas, 17 BO, 3 BW, 180 FTP.

1/08/97 **Correction** 24 hr prod: 0 Gas, 43 BO, 308 BW.

1/09/97 24 hr prod: 24 hr prod: 0 Gas, 96 BO, 222 BW.

1/10/97 24 hr prod: 0 Gas, 57 BO, 204 BW.

1/11/97 24 hr prod: 0 Gas, 75 BO, 142 BW.

1/12/97 24 hr prod: 0 Gas, 89 BO, 231 BW.

1/13/97 24 hr prod: 0 Gas, 106 BO, 217 BW.

1/14/97 24 hr prod: 0 Gas, 77 BO, 201 BW.

1/16/97

Initial Potential 1/09/97: 96 BO, 0 Gas, 222 BW. **Final report. DROP FROM REPORT.**

MESA VERDE "6" FED. #14
BONE SPRING

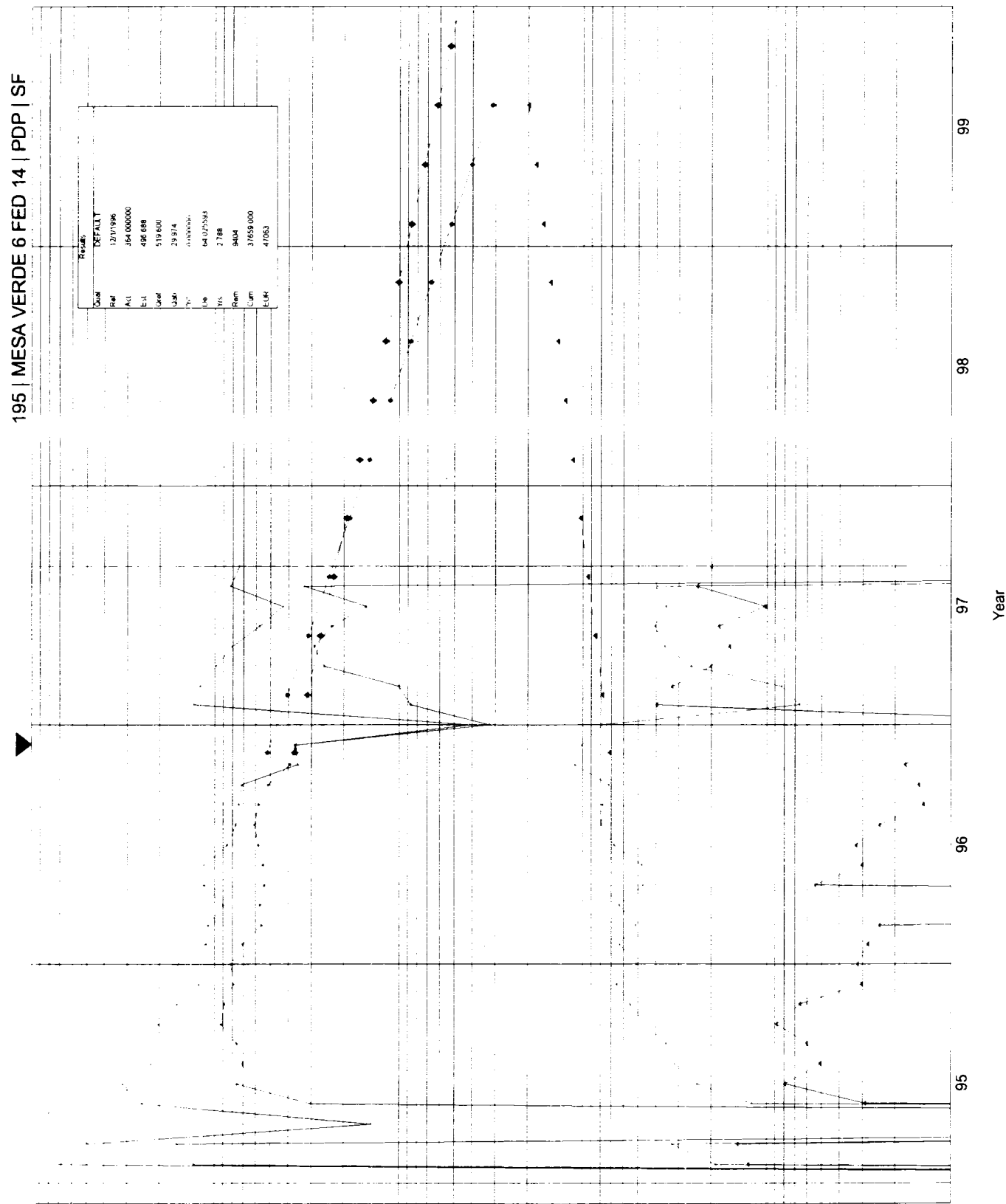
MO-YEAR	OIL MBO	GAS MMCF	MO-YEAR	OIL MBO	GAS MMCF
Apr-95	143	0	Jan-98	179	1884
May-95	2496	3005	Feb-98	165	1785
Jun-95	3175	7584	Mar-98	151	1691
Jul-95	2383	7402	Apr-98	139	1602
Aug-95	2327	7835	May-98	127	1518
Sep-95	2230	9354	Jun-98	117	1438
Oct-95	1757	8884	Jul-98	107	1362
Nov-95	1221	7961	Aug-98	99	1290
Dec-95	1600	8171	Sep-98	91	1222
Jan-96	1118	7053	Oct-98	84	1128
Feb-96	1087	5584	Nov-98	77	1034
Mar-96	899	5685	Dec-98	71	953
Apr-96	1143	5382	Jan-99	65	873
May-96	1148	5475	Feb-99	60	806
Jun-96	862	5804	Mar-99	55	739
Jul-96	771	6086	Apr-99	51	685
Aug-96	739	5786	May-99	47	631
Sep-96	716	5140	Jun-99	43	577
Oct-96	354	3912	Jul-99	40	537
Nov-96	364	3685	Aug-99	37	497
PROJECTION			Sep-99	30	403
Dec-96	498	3606	Oct-99	25	336
Jan-97	457	3417	Nov-99	20	269
Feb-97	420	3237	Dec-99	15	201
Mar-97	386	3066	Jan-00	10	130
Apr-97	354	2905	Feb-00	5	67
May-97	325	2752	Mar-00	0	0
Jun-97	299	2607			
Jul-97	274	2469			
Aug-97	252	2339			
Sep-97	231	2216			
Oct-97	212	2099			
Dec-97	195	1989			

OIL

WATER-BBL/MO	100	1000	10000	100000	1e+06
GAS-MCF/MO	1	10	100	1000	10000
OIL-BBL/MO	0.1	1	10	100	1000

GOR-SCF/BBL	100	1000	10000	100000	1e+06
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195 | MESA VERDE 6 FEB 14 | PDP | SF

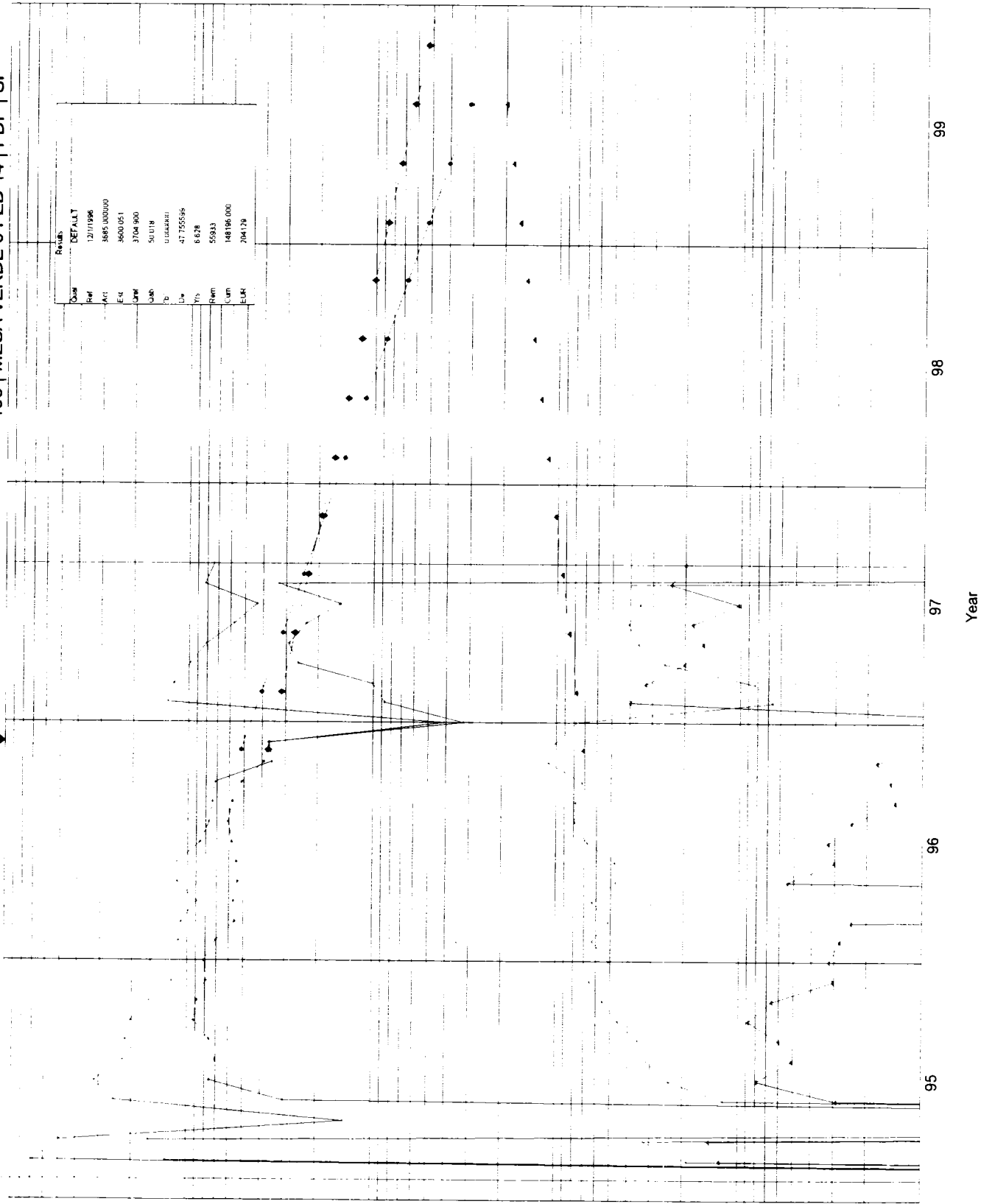


GAS

WATER-BBL/MO	1e+06	100000	10000	1000	100
GAS-MCF/MO	10000	1000	100	10	1
OIL-BBL/MO	1000	100	10	1	0.1

GOR-SCF/BBL	1e+06	100000	10000	1000	100
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195 | MESA VERDE 6 FED 14 | PDP | SF

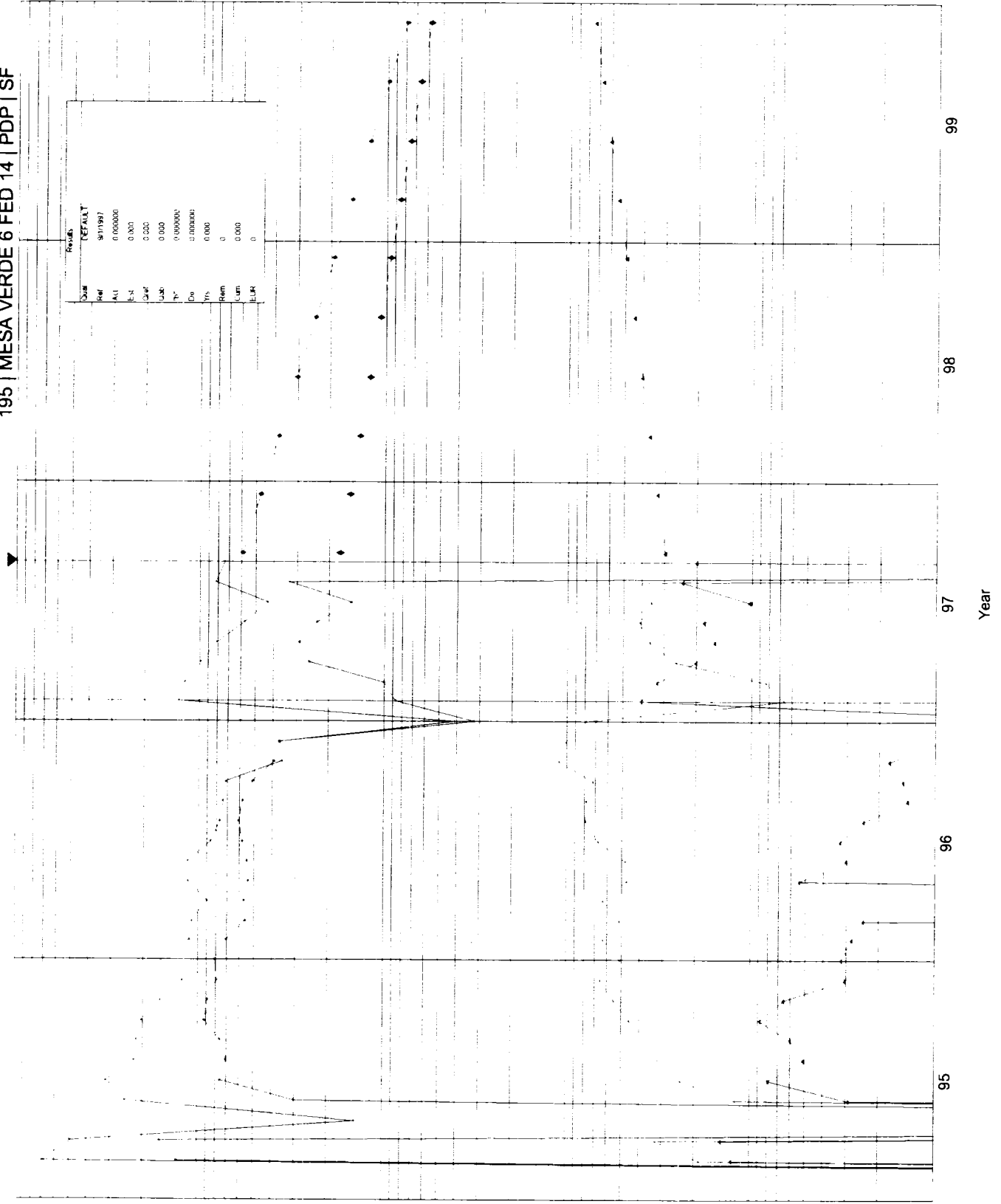


OIL

WATER-BBL/MO	1e+06	100000	10000	1000	100
GAS-MCF/MO	10000	1000	100	10	1
OIL-BBL/MO	1000	100	10	1	0.1

195 | MESA VERDE 6 FED 14 | PDP | SF

GOR-SCF/BBL 1e+06 100000 10000 1000 100

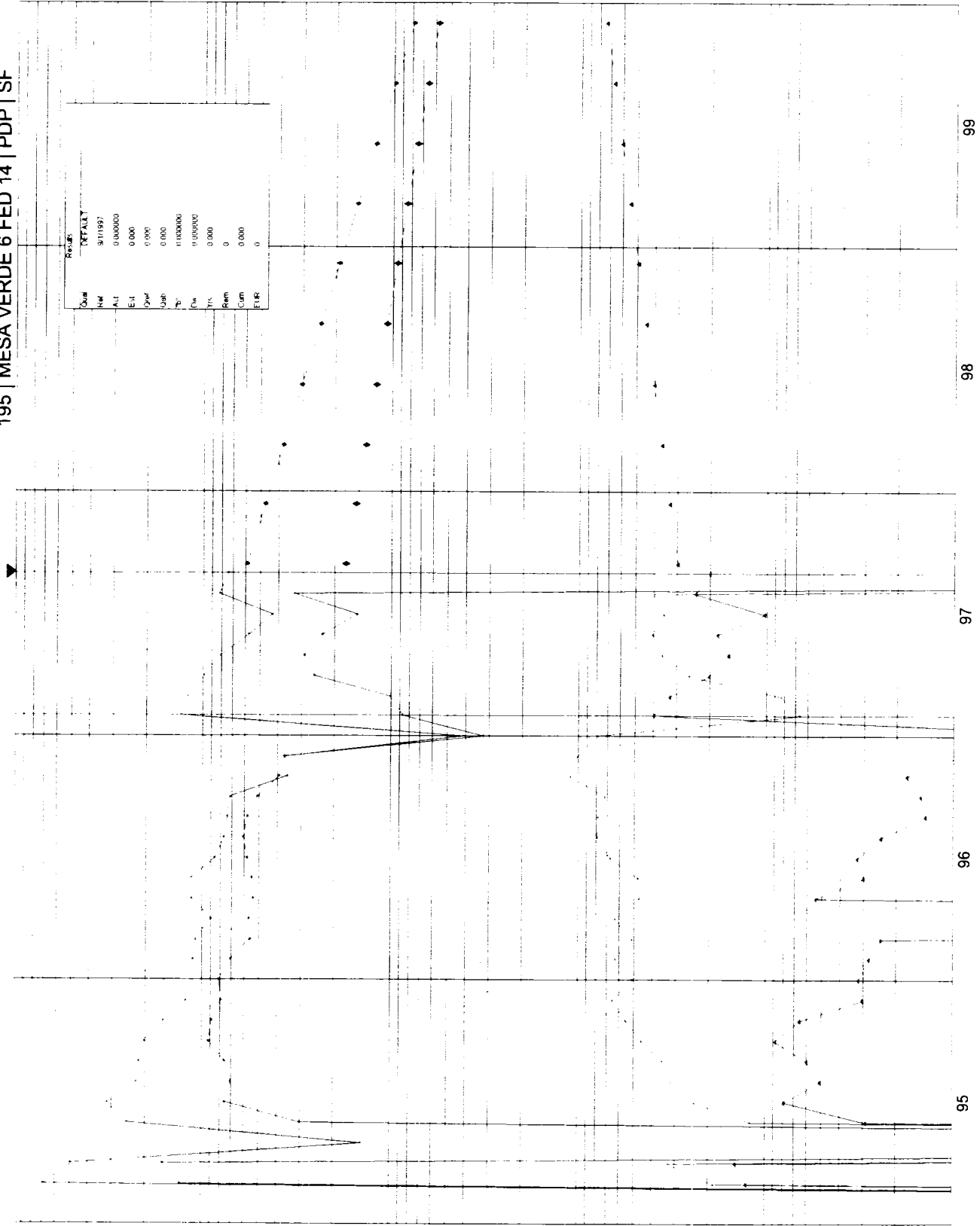


GOR-SCF/BBL 1e+06 100000 10000 1000 100

195 | MESA VERDE 6 FED 14 | PDP | SF

GAS

100 1000 10000 100000 1e+06
WATER-BBL/MO
1 10 100 1000
GAS-MCF/MO
0.1 1 10 100 1000
OIL-BBL/MO



Year