

District I - (505) 393-6161

PO Box 1980

Hobbs, NM 88241-1980

District II - (505) 748-1283

811 S. First

Artesia, NM 88210

District III - (505) 334-6178

1000 Rio Brazos Road

Aztec, NM 87410

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 11/1/95

Submit Original

Plus 2 Copies

to appropriate

District Office

H-D323

**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 CONSERVATION DIVISION.

I. Operator: Texaco Exploration & Production Inc OGRID #: 022351

Address: 205 E. Bender Blvd.; Hobbs, New Mexico 88240

Contact Party: Monte Duncan Phone #: (505) 397-0418

II. Name of Well: Vacuum Grayburg San Andres #155 API #: 30 025 30800

Location of Well: Unit Letter A, 660 Feet from the North line and 10 feet from the East line, Section 2, Township 18S, Range 34E, NMPM, Lea County

III. Date Workover Procedures Commenced: 11-06-96

Date Workover Procedures were Completed: 12-16-96

IV. Attach a description of the Workover Procedures undertaken to increase the projection 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: Vacuum Grayburg San Andres

VII. AFFIDAVIT:

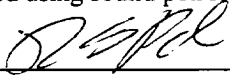
State of N. M.)

) ss.

County of Lea)

Russell S. Pool, 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.  
Restoration Project.
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)

Senior Engineer - Hobbs Operating Unit  
(Title)

SUBSCRIBED AND SWORN TO before me this 17<sup>th</sup> day of June, 1997.

*Pam D. Hunt*  
Notary Public Pam D. Hunt

My Commission expires: 9/13/97

**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 12-16-96, 19    .

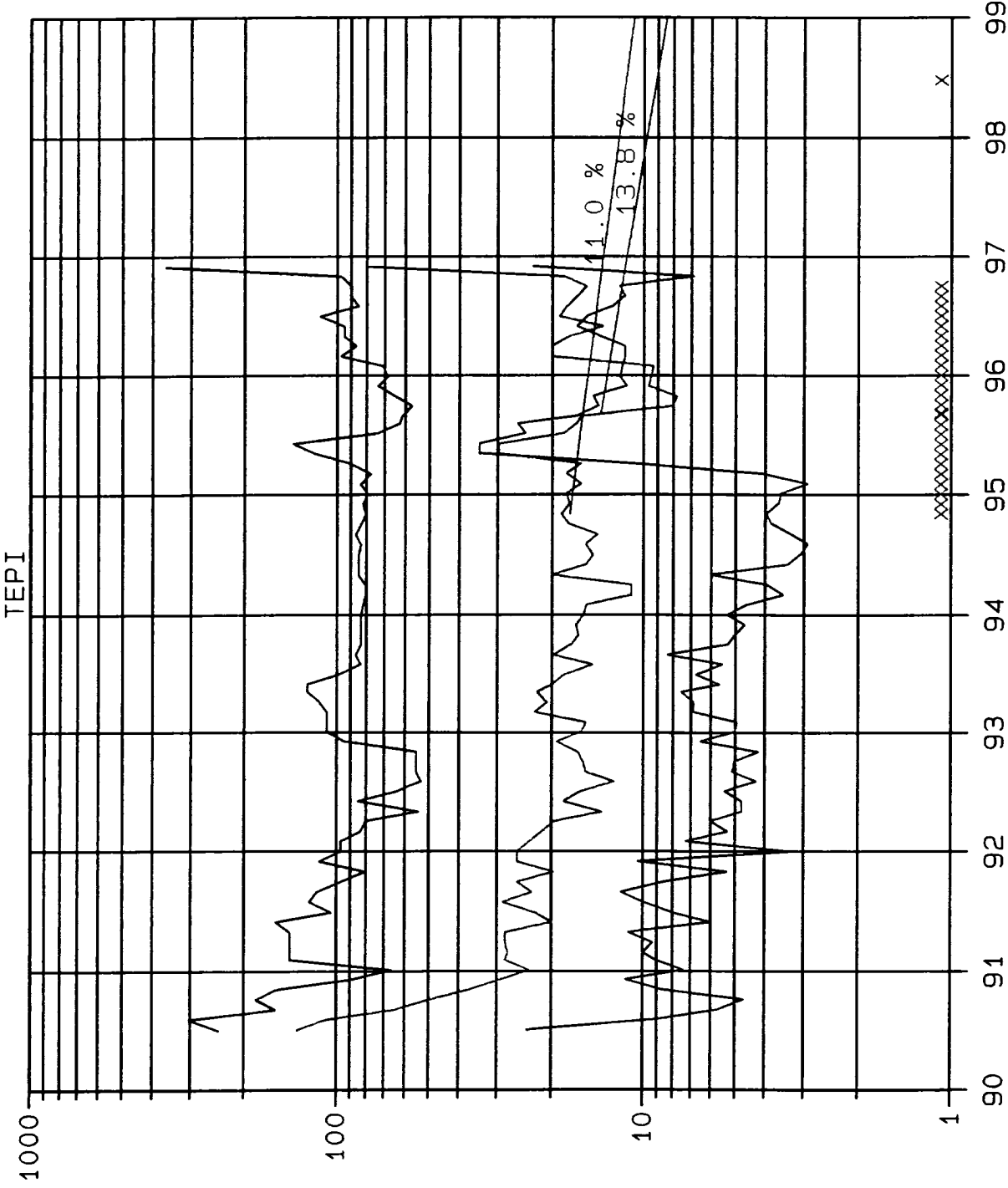
*Paul S. Kautz*  
District Supervisor, District     1      
Oil Conservation Division

Date: 6/19/97

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

6/16/97  
\*  
RECEIVED  
OIL CONSERVATION DIVISION  
JUN 19 1997

VACUUM GRAYBURG SAN ANDRES UT 155



YEARS

LEASE DATA

LSE  
 FLD  
 OPER TEPI  
 ZONE  
 --  
 COUNTY 025  
 STATE 30  
 30025308000001  
 STATUS 11-96  
 CO 51 MBO  
 CG 21 MMCF  
 CW 235 MBW  
 BOPD 81  
 BWPD 362  
 MCFPD 23  
 WELLS 1  
 CI 0 MBWI  
 BWIPD 0

BOPD  
 BWPD  
 MCFPD

# Production Projection

Well Name & #:

VACUUM GRAYBURG SAN ANDRES #155

Prior Oil Prod. Rate (BOPD):

17

Producing Formation:

VACUUM GRAYBURG SAN ANDRES

Oil Decline Factor:

0.99033585

Oil Decline Rate (%):

11

Prior Gas Prod. Rate (MCFGD):

7

Gas Decline Rate (%):

14

Completion Date (m/yr):

Dec-96

0.987701255

Month	Projected Oil Production	Projected Gas Production	Projected Cumulative Oil Production	Projected Cumulative Gas Production
Dec-96	517	213	517	213
Jan-97	512	210	1029	423
Feb-97	507	208	1535	631
Mar-97	502	205	2037	836
Apr-97	497	203	2535	1038
May-97	492	200	3027	1238
Jun-97	488	198	3514	1436
Jul-97	483	195	3997	1631
Aug-97	478	193	4475	1824
Sep-97	474	190	4949	2014
Oct-97	469	188	5418	2202
Nov-97	464	186	5882	2388
Dec-97	460	183	6342	2571
Jan-98	456	181	6798	2752
Feb-98	451	179	7249	2931
Mar-98	447	177	7696	3108
Apr-98	442	175	8138	3283
May-98	438	172	8576	3455
Jun-98	434	170	9010	3625
Jul-98	430	168	9440	3794
Aug-98	426	166	9865	3960
Sep-98	421	164	10287	4124
Oct-98	417	162	10704	4286
Nov-98	413	160	11118	4446
Dec-98	409	158	11527	4604
Jan-99	405	156	11932	4760
Feb-99	401	154	12334	4915
Mar-99	398	152	12732	5067
Apr-99	394	150	13125	5217
May-99	390	149	13515	5366
Jun-99	386	147	13901	5513
Jul-99	382	145	14284	5658
Aug-99	379	143	14663	5801
Sep-99	375	141	15038	5942

# Production Projection

Oct-99	371	140	15409	6082
Nov-99	368	138	15777	6220
Dec-99	364	136	16141	6357
Jan-00	361	135	16502	6491
Feb-00	361	135	16502	6491
Mar-00	357	133	16860	6624
Apr-00	354	131	17213	6755
May-00	350	130	17564	6885
Jun-00	347	128	17911	7013
Jul-00	344	127	18255	7140
Aug-00	340	125	18595	7265
Sep-00	337	123	18932	7388
Oct-00	334	122	19266	7510
Nov-00	331	120	19597	7631
Dec-00	327	119	19924	7750
Jan-01	324	117	20248	7867
Feb-01	324	117	20248	7867
Mar-01	321	116	20569	7983
Apr-01	318	115	20887	8098
May-01	315	113	21202	8211
Jun-01	312	112	21514	8323
Jul-01	309	110	21823	8433
Aug-01	306	109	22129	8542
Sep-01	303	108	22432	8650
Oct-01	300	106	22732	8756
Nov-01	297	105	23029	8862
Dec-01	294	104	23323	8965
Jan-02	291	103	23615	9068
Feb-02	291	103	23615	9068
Mar-02	289	101	23903	9169
Apr-02	286	100	24189	9269
May-02	283	99	24472	9368
Jun-02	280	98	24752	9466
Jul-02	278	96	25030	9562
Aug-02	275	95	25305	9657
Sep-02	272	94	25577	9751
Oct-02	270	93	25847	9844
Nov-02	267	92	26114	9936
Dec-02	264	91	26378	10026
Jan-03	262	89	26640	10116
Feb-03	259	88	26899	10204
Mar-03	257	87	27156	10292
Apr-03	254	86	27411	10378
May-03	252	85	27663	10463
Jun-03	249	84	27912	10547
Jul-03	247	83	28159	10630
Aug-03	245	82	28404	10712

# Production Projection

Sep-03	242	81	28646	10793
Oct-03	240	80	28886	10873
Nov-03	238	79	29124	10952
Dec-03	235	78	29359	11031
Jan-04	233	77	29592	11108
Feb-04	231	76	29823	11184
Mar-04	229	75	30051	11259
Apr-04	226	74	30278	11333
May-04	224	73	30502	11407
Jun-04	222	73	30724	11479
Jul-04	220	72	30944	11551
Aug-04	218	71	31162	11622
Sep-04	216	70	31377	11692
Oct-04	214	69	31591	11761
Nov-04	212	68	31802	11829
Dec-04	209	67	32012	11896
Jan-05	207	66	32219	11963
Feb-05	205	66	32425	12028
Mar-05	203	65	32628	12093
Apr-05	201	64	32830	12157
May-05	200	63	33029	12220
Jun-05	198	63	33227	12283
Jul-05	196	62	33422	12345
Aug-05	194	61	33616	12406
Sep-05	192	60	33808	12466
Oct-05	190	59	33998	12525
Nov-05	188	59	34186	12584
Dec-05	186	58	34373	12642
Jan-06	185	57	34558	12699
Feb-06	183	57	34740	12756
Mar-06	181	56	34921	12812
Apr-06	179	55	35101	12867
May-06	178	55	35278	12922
Jun-06	176	54	35454	12976
Jul-06	174	53	35628	13029
Aug-06	172	53	35801	13081
Sep-06	171	52	35972	13133
Oct-06	169	51	36141	13185
Nov-06	168	51	36308	13235
Dec-06	166	50	36474	13285
Jan-07	164	49	36639	13335
Feb-07	163	49	36801	13384
Mar-07	161	48	36962	13432
Apr-07	160	48	37122	13479
May-07	158	47	37280	13526
Jun-07	157	46	37437	13573
Jul-07	155	46	37592	13619

# Production Projection

Aug-07	154	45	37745	13664
Sep-07	152	45	37897	13709
Oct-07	151	44	38048	13753
Nov-07	149	44	38197	13797
Dec-07	148	43	38344	13840
Jan-08	146	43	38491	13882
Feb-08	145	42	38635	13924
Mar-08	143	42	38779	13966
Apr-08	142	41	38921	14007
May-08	141	41	39062	14047
Jun-08	139	40	39201	14087
Jul-08	138	40	39339	14127
Aug-08	137	39	39475	14166
Sep-08	135	39	39611	14205
Oct-08	134	38	39745	14243
Nov-08	133	38	39877	14280
Dec-08	131	37	40009	14318
Jan-09	130	37	40139	14354
Feb-09	129	36	40268	14391
Mar-09	128	36	40396	14426
Apr-09	126	35	40522	14462
May-09	125	35	40647	14497
Jun-09	124	35	40771	14531
Jul-09	123	34	40894	14565
Aug-09	122	34	41016	14599
Sep-09	120	33	41136	14632
Oct-09	119	33	41255	14665
Dec-09	118	32	41373	14697
Dec-09	117	32	41490	14729
Jan-10	116	32	41606	14761
Feb-10	115	31	41721	14792
Mar-10	114	31	41834	14823
Apr-10	113	30	41947	14854
May-10	111	30	42058	14884
Jun-10	110	30	42169	14914
Jul-10	109	29	42278	14943
Aug-10	108	29	42386	14972
Oct-10	107	29	42493	15001
Nov-10	106	28	42599	15029
Dec-10	105	28	42705	15057
Dec-10	104	28	42809	15085
Jan-11	103	27	42912	15112
Feb-11	102	27	43014	15139
Mar-11	101	27	43115	15165
Apr-11	100	26	43215	15192
May-11	99	26	43314	15218
Jul-11	98	26	43412	15243

# Production Projection

Aug-11	97	25	43510	15269
Sep-11	96	25	43606	15294
Oct-11	95	25	43701	15318
Nov-11	94	24	43796	15343
Dec-11	94	24	43889	15367
Jan-12	93	24	43982	15391
Feb-12	92	24	44074	15414
Mar-12	91	23	44165	15437
Apr-12	90	23	44255	15460
May-12	89	23	44344	15483
Jun-12	88	22	44432	15505
Jul-12	87	22	44519	15527
Aug-12	87	22	44606	15549
Sep-12	86	22	44692	15571
Oct-12	85	21	44777	15592
Nov-12	84	21	44861	15613
Dec-12	83	21	44944	15634
Jan-13	82	21	45026	15655
Feb-13	82	20	45108	15675
Mar-13	81	20	45189	15695
Apr-13	80	20	45269	15715
May-13	79	20	45348	15734
Jun-13	79	19	45427	15753
Jul-13	78	19	45505	15772
Aug-13	77	19	45582	15791
Sep-13	76	19	45658	15810
Oct-13	76	18	45734	15828
Nov-13	75	18	45808	15846
Dec-13	74	18	45883	15864
Jan-14	73	18	45956	15882
Feb-14	73	17	46029	15899
Mar-14	72	17	46101	15917
Apr-14	71	17	46172	15934
May-14	71	17	46242	15951
Jun-14	70	17	46312	15967
Jul-14	69	16	46382	15984
Aug-14	69	16	46450	16000
Sep-14	68	16	46518	16016
Oct-14	67	16	46585	16032
Nov-14	67	16	46652	16047
Dec-14	66	15	46718	16063
Jan-15	65	15	46783	16078
Feb-15	65	15	46848	16093
Mar-15	64	15	46912	16108
Apr-15	63	15	46975	16123
May-15	63	15	47038	16137
Jun-15	62	14	47100	16151



# Production Projection

Jul-15	62	14	47162	16166
Aug-15	61	14	47223	16180
Sep-15	60	14	47283	16193
Oct-15	60	14	47343	16207
Nov-15	59	13	47402	16221
Dec-15	59	13	47461	16234
Jan-16	58	13	47519	16247
Mar-16	58	13	47577	16260
Apr-16	57	13	47634	16273
May-16	56	13	47690	16285
Jun-16	56	13	47746	16298
Jul-16	55	12	47802	16310
Aug-16	55	12	47856	16323
Sep-16	54	12	47911	16335
Oct-16	54	12	47965	16346
Nov-16	53	12	48018	16358
Dec-16	53	12	48071	16370
Jan-17	52	11	48123	16381
Feb-17	52	11	48175	16393
Mar-17	51	11	48226	16404
Apr-17	51	11	48277	16415
May-17	50	11	48327	16426
Jun-17	50	11	48377	16437
Jul-17	49	11	48426	16447
Aug-17	49	11	48475	16458
Sep-17	48	10	48523	16468
Oct-17	48	10	48571	16478
Nov-17	47	10	48618	16489
Dec-17	47	10	48665	16499
Jan-18	46	10	48712	16508
Feb-18	46	10	48758	16518
Mar-18	46	10	48803	16528
Apr-18	45	10	48848	16537
May-18	45	9	48893	16547
Jun-18	44	9	48937	16556
Jul-18	44	9	48981	16565
Aug-18	43	9	49025	16574
Sep-18	43	9	49068	16583
Oct-18	43	9	49110	16592
Nov-18	42	9	49153	16601
Dec-18	42	9	49194	16610
Jan-19	41	9	49236	16618
Feb-19	41	8	49277	16626
Mar-19	41	8	49317	16635
Apr-19	40	8	49357	16643
May-19	40	8	49397	16651
May-19	39	8	49437	16659

# Production Projection

Jun-19	39	8	49476	16667
Jul-19	39	8	49514	16675
Aug-19	38	8	49553	16683
Sep-19	38	8	49591	16690
Oct-19	38	8	49628	16698
Nov-19	37	7	49665	16705
Dec-19	37	7	49702	16713
Jan-20	36	7	49739	16720
Feb-20	36	7	49775	16727
Mar-20	36	7	49811	16734
Apr-20	35	7	49846	16741
May-20	35	7	49881	16748
Jun-20	35	7	49916	16755
Jul-20	34	7	49950	16761
Aug-20	34	7	49984	16768
Sep-20	34	7	50018	16775
Oct-20	33	6	50051	16781
Nov-20	33	6	50085	16788
Dec-20	33	6	50117	16794
Jan-21	32	6	50150	16800
Feb-21	32	6	50182	16806
Mar-21	32	6	50214	16812
Apr-21	32	6	50245	16819
May-21	31	6	50276	16824
Jun-21	31	6	50307	16830
Jul-21	31	6	50338	16836
Aug-21	30	6	50368	16842
Sep-21	30	6	50398	16848
Oct-21	30	6	50428	16853
Nov-21	29	6	50458	16859
Dec-21	29	5	50487	16864
Jan-22	29	5	50516	16870
Feb-22	29	5	50544	16875
Mar-22	28	5	50573	16880
Apr-22	28	5	50601	16885
May-22	28	5	50628	16890
Jun-22	28	5	50656	16896
Jul-22	27	5	50683	16901
Aug-22	27	5	50710	16905
Sep-22	27	5	50737	16910
Oct-22	26	5	50763	16915
Nov-22	26	5	50790	16920
Dec-22	26	5	50816	16925
Jan-23	26	5	50841	16929
Feb-23	25	5	50867	16934
Mar-23	25	5	50892	16938
Apr-23	25	4	50917	16943

# Production Projection

May-23	25	4	50942	16947
Jun-23	24	4	50966	16952
Jul-23	24	4	50990	16956
Aug-23	24	4	51014	16960
Sep-23	24	4	51038	16964
Oct-23	24	4	51062	16969
Nov-23	23	4	51085	16973
Dec-23	23	4	51108	16977
Jan-24	23	4	51131	16981
Feb-24	23	4	51154	16985
Mar-24	22	4	51176	16989
Apr-24	22	4	51198	16993
May-24	22	4	51220	16996
Jun-24	22	4	51242	17000
Jul-24	22	4	51264	17004
Aug-24	21	4	51285	17008
Sep-24	21	4	51306	17011
Oct-24	21	4	51327	17015
Nov-24	21	4	51348	17018
Dec-24	21	3	51369	17022
Jan-25	20	3	51389	17025
Feb-25	20	3	51409	17029
Mar-25	20	3	51429	17032
Apr-25	20	3	51449	17035
May-25	20	3	51469	17039
Jun-25	19	3	51488	17042
Jul-25	19	3	51507	17045
Aug-25	19	3	51526	17048
Sep-25	19	3	51545	17051
Oct-25	19	3	51564	17054
Nov-25	18	3	51582	17057
Dec-25	18	3	51600	17061
Jan-26	18	3	51619	17063
Feb-26	18	3	51637	17066
Mar-26	18	3	51654	17069
Apr-26	18	3	51672	17072
May-26	17	3	51689	17075
Jun-26	17	3	51707	17078
Jul-26	17	3	51724	17081
Aug-26	17	3	51741	17083
Sep-26	17	3	51757	17086
Oct-26	17	3	51774	17089
Nov-26	16	3	51790	17091
Dec-26	16	3	51807	17094
Jan-27	16	3	51823	17096
Feb-27	16	3	51839	17099
Mar-27	16	3	51855	17102

OIL CONSERVATION DIVISION

DISTRICT I P.O. Box 1980, Hobbs, NM 88240
DISTRICT II P.O. Box Drawer DD, Artesia, NM 88210
DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410

P.O. Box 2088 Santa Fe, New Mexico 87504-2088

WELL API NO. 30-025-30800
5. Indicate Type of Lease STATE [X] FEE [ ]
6. State Oil / Gas Lease No. 857948
7. Lease Name or Unit Agreement Name VACUUM GRAYBURG SAN ANDRES UNIT
8. Well No. 155
9. Pool Name or Wildcat VACUUM GRAYBURG SAN ANDRES
10. Elevation (Show whether DF, RKB, RT,GR, etc.) 4019' GR

SUNDRY NOTICES AND REPORTS ON WELL (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT (FORM C-101) FOR SUCH PROPOSALS.)
1. Type of Well: OIL WELL [X] GAS WELL [ ] OTHER [ ]
2. Name of Operator TEXACO EXPLORATION & PRODUCTION INC.
3. Address of Operator 205 E. Bender, HOBBS, NM 88240
4. Well Location Unit Letter A ; 660 Feet From The NORTH Line and 10 Feet From The EAST Line Section 2 Township 18S Range 34E NMPM LEA COUNTY

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data
NOTICE OF INTENTION TO:
PERFORM REMEDIAL WORK [ ] PLUG AND ABANDON [ ]
TEMPORARILY ABANDON [ ] CHANGE PLANS [ ]
PULL OR ALTER CASING [ ]
OTHER: [ ]
SUBSEQUENT REPORT OF:
REMEDIAL WORK [ ] ALTERING CASING [ ]
COMMENCE DRILLING OPERATION [ ] PLUG AND ABANDONMENT [ ]
CASING TEST AND CEMENT JOB [ ]
OTHER: FRACTURE TREATMENT [X]

12. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.
The notice of intent dated 11/12/96 to perform this workover was approved by the NMOCD on 11/15/96.
11/6/96 - 11/21/96
1. MIRU. TOH w/ rods & pump. Installed BOP. Tagged fill & TOH w/ tubing.
2. TIH w/ bit, cleaned out to 4650' (PBSD).
3. Ran GR/CCL log. Perforated from 4364'-4590' (4 JSPF, 120 degree phasing, 156 holes).
4. TIH w/ 7" pkr. Tested tbg to 8500 psi. Set pkr @ 4253', loaded backside to 1000#, OK. Spotted 2 drums TH-756 inhibitor mixed in 20 Bbls fresh water. Flushed w/ 250 bbls fresh water.
5. Fracture treated perms from 4268'-4630' w/ 35,000 gals 40# Crosslinked Gel, 123,340# 16/30 Ottawa sand & 39,500# 16/30 Curable Resin Coated sand. Max P = 5800# AIR = 35 BPM. SI for 24 hours.
6. Released pkr, TOH w/ pkr & frac tbg. Tbg stuck @ 4367', chemical cut tbg @ 4351', TOH 4347' 2 7/8" tbg. Fished remainder of tbg out of hole. TIH w/ bit & cleaned out to 4640'.
7. TIH w/ production equipment & returned well to production.
OPT 12/16/96 PUMPING BY ROD PUMP: 17 BOPD, 84 BWPDP, 7 MCFD (INTERNAL TEPI STATUS REMAINS PM)

I hereby certify that the information above is true and complete to the best of my knowledge and belief.
SIGNATURE [Signature] TITLE Engr Asst DATE 1/15/97
TYPE OR PRINT NAME Monte C. Duncan Telephone No. 397-0418

(This space for State Use) ORIGINAL SIGNED BY JERRY SEXTON
APPROVED BY [Signature] DISTRICT I SUPERVISOR TITLE DATE
CONDITIONS OF APPROVAL, IF ANY:
DeSoto/Nichols 12-93 ver 1.0