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Aztec, NM 87410
District IV

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

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: CHEVRON U.S.A., INC. OGRID #: 4323
Address: P.O. BOX 1150 MIDLAND, TX 79702
Contact Party: MICHAEL VILLALVA Phone: (915) 687-7262
- II. ✓ Name of Well: ARROWHEAD GRAYBURG UNIT #120 API #: 30-025-29093
Location of Well: Unit Letter D, 660 Feet from the North line and 990 feet from the West line,
Section 36, Township 21S, Range 36E, NMPM, Lea County
- III. ✓ Date Workover Procedures Commenced: 3/26/97
Date Workover Procedures were Completed: 4/9/97
- 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:
ARROWHEAD
~~EUNICE MONUMENT GRAYBURG SAN ANDRES~~

VII. AFFIDAVIT:

State of TEXAS)
) ss.
County of MIDLAND)

J.K. RIPLEY, 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.

J.K. Ripley
(Name)

T.A.
(Title)

mf

SUBSCRIBED AND SWORN TO before me this 16 day of March, 1998



Maggie M. Bermea

Notary Public for State of Texas

My Commission expires: July 30, 2001

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 4-9-97, 1997.

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

Date: 3/19/98

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

DATE: _____

Arrowhead Grayburg 120
Arrowhead Grayburg Field
Lea County, New Mexico

March 5, 1997

**PROCEDURE TO REPAIR CASING LEAK AND SQUEEZE ZONE 2 PERFS w/
NITRIFIED CEMENT:**

1. MIRU PU. RU BOPE. POOH w/ production equipment, including the Watson scab liner set from 3740' to 3792'. Set RBP above perfs and perform mech integrity test to 500 psi or as per OCD requirements.
2. Repair intermediate casing leak as per OCD recommendations, test casing, and report to Midland office. Prepare to squeeze perforations.
3. Plug back w/ sand and set 5½" CIBP @ 3768' using a mechanical collar locator. This should be between 3762' (bottom perf to be squeezed) and 3774' (next interval of perforations) -- see attached R.A.L. log (Wedge Wireline 6/2/94).
4. RIH w/ 5½" CICR and set @ $\pm 3700'$. Cement squeeze the following isolated interval w/ 300 sxs nitrified cement: 3746'-3762'.
5. Drill out CICR and nitrified cement. Pressure test squeeze to 500 psi.
6. Drill out CIBP and clean out sand to PBTD @ 4091'. POOH.
7. Run production equipment per field operations design. Hang well on.
8. Clean and clear location. Turn well over to production (David Jennings).
9. Report results to Midland office.

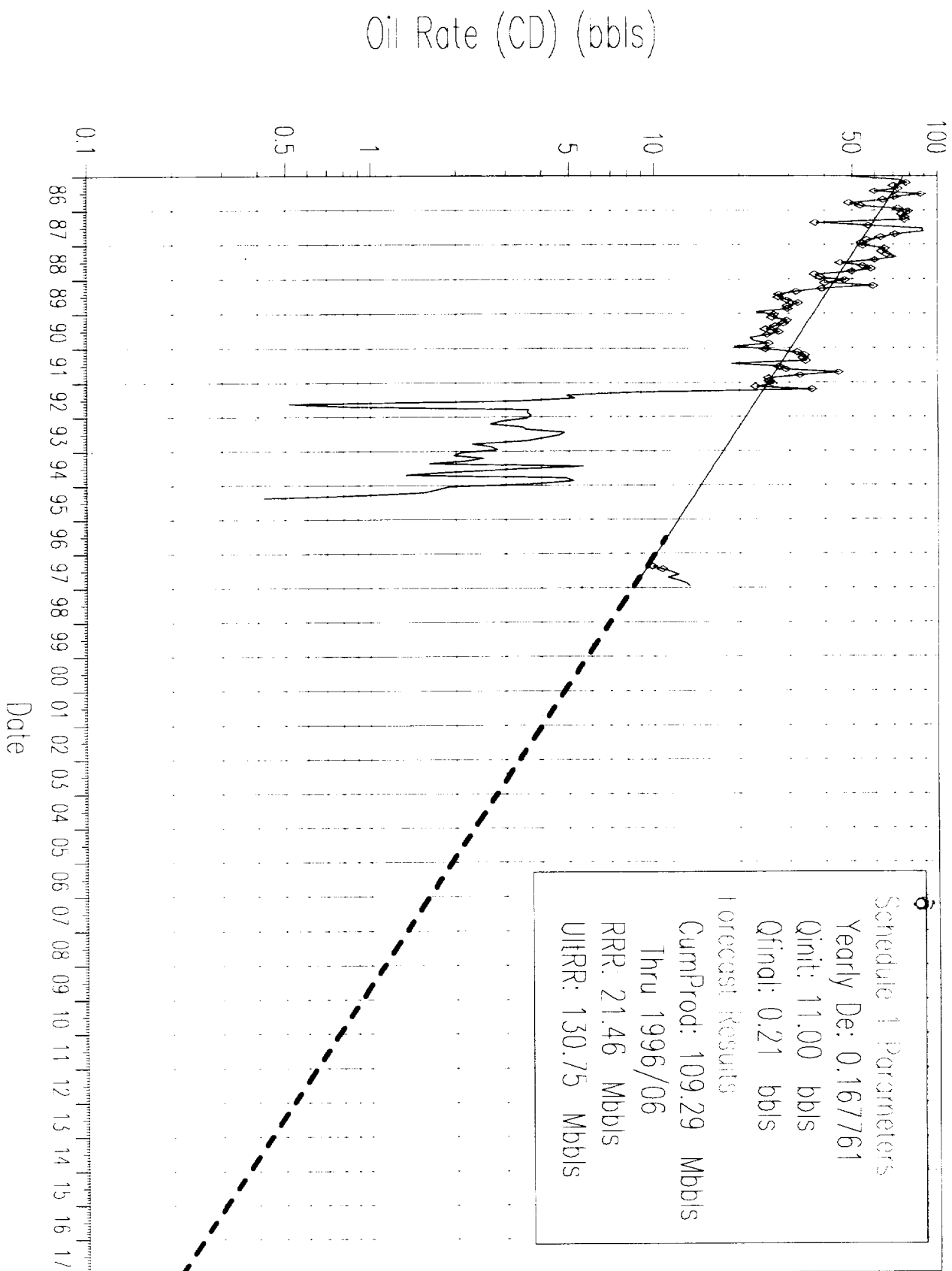
Michael Villalva
Petroleum Engineer
(687-7262)

Supplement to AGU120 Procedure:

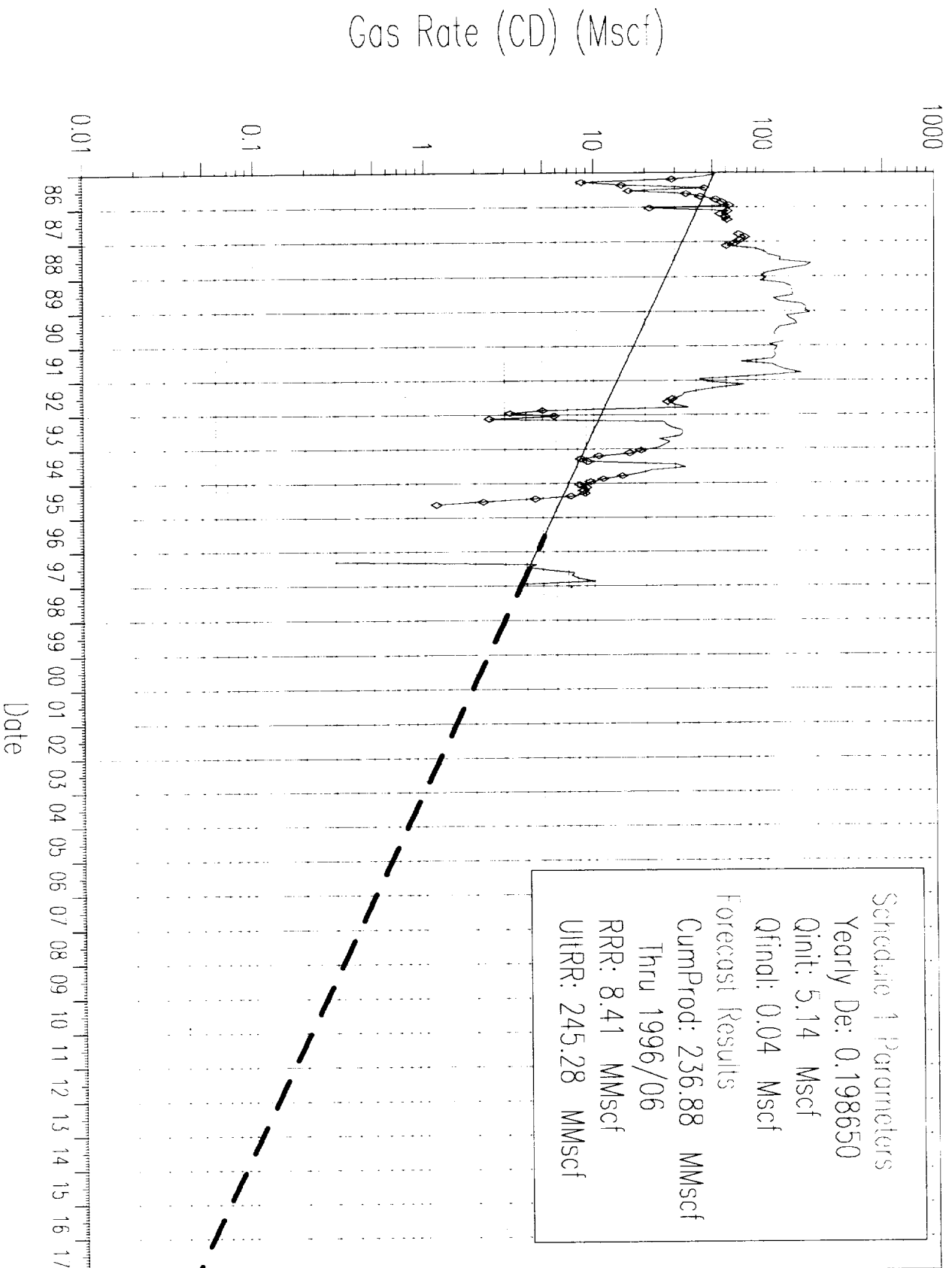
- Before the cement squeeze job:
 - pickle the tbg with ~500 gallons. For the pickle set the packer at 3740' and do not displace out the end of the tubing. Then, for the stimulation, set the packer at 3792' +/-.
 - stimulate the well with a treatment volume of 2500 gallons Resi-sol II+ (90% acid, 10% toluene). The maximum treating pressure is 1250 psi.
- Instead of putting the CIBP on top of the sand, use the 100 mesh sand that was also used on AGU132.

LEASE : ARROWHEAD GRAYBURG UNIT 120

WELL: FM2853:01 CDATE: 851211



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DATE	Oil Vol Prod bbls	FORECASTED OIL VOLUME bbls	Gas Vol Prod Mscf	FORECASTED GAS VOLUME Mscf
9001	826	0.00	5780	0.00
9002	737	0.00	3819	0.00
9003	917	0.00	4378	0.00
9004	867	0.00	4573	0.00
9005	836	0.00	4865	0.00
9006	748	0.00	3709	0.00
9007	861	0.00	3670	0.00
9008	783	0.00	3563	0.00
9009	654	0.00	3501	0.00
9010	699	0.00	0	0.00
9011	767	0.00	3986	0.00
9012	597	0.00	3371	0.00
9101	773	0.00	3706	0.00
9102	902	0.00	3212	0.00
9103	1060	0.00	3596	0.00
9104	1014	0.00	3524	0.00
9105	1070	0.00	3468	0.00
9106	565	0.00	2213	0.00
9107	862	0.00	3495	0.00
9108	912	0.00	3765	0.00
9109	1349	0.00	4153	0.00
9110	1021	0.00	5186	0.00
9111	767	0.00	2791	0.00
9112	798	0.00	1303	0.00
9201	816	0.00	1456	0.00
9202	667	0.00	2219	0.00
9203	1124	0.00	1683	0.00
9204	264	0.00	1292	0.00
9205	152	0.00	1056	0.00
9206	158	0.00	982	0.00
9207	102	0.00	906	0.00
9208	16	0.00	856	0.00
9209	26	0.00	896	0.00
9210	112	0.00	1117	0.00
9211	107	0.00	152	0.00
9212	114	0.00	101	0.00
9301	110	0.00	183	0.00
9302	81	0.00	69	0.00
9303	82	0.00	794	0.00
9304	103	0.00	807	0.00
9305	110	0.00	884	0.00
9306	145	0.00	986	0.00
9307	143	0.00	1032	0.00
9308	125	0.00	988	0.00
9309	106	0.00	730	0.00
9310	71	0.00	869	0.00
9311	80	0.00	781	0.00
9312	87	0.00	741	0.00
9401	65	0.00	592	0.00
9402	55	0.00	459	0.00

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DATE	Oil Vol Prod bbls	FORECASTED OIL VOLUME bbls	Gas Vol Prod Mscf	FORECASTED GAS VOLUME Mscf
9403	78	0.00	3 5	0.00
9404	64	0.00	254	0.00
9405	50	0.00	289	0.00
9406	168	0.00	915	0.00
9407	97	0.00	1075	0.00
9408	58	0.00	670	0.00
9409	40	0.00	555	0.00
9410	151	0.00	460	0.00
9411	156	0.00	344	0.00
9412	120	0.00	299	0.00
9501	59	0.00	258	0.00
9502	48	0.00	255	0.00
9503	48	0.00	273	0.00
9504	28	0.00	268	0.00
9505	13	0.00	229	0.00
9506	0	0.00	137	0.00
9507	0	0.00	70	0.00
9508	0	0.00	37	0.00
9509	0	0.00	0	0.00
9510	0	0.00	0	0.00
9511	0	0.00	0	0.00
9512	0	0.00	0	0.00
9601	0	0.00	0	0.00
9602	0	0.00	0	0.00
9603	0	0.00	0	0.00
9604	0	0.00	0	0.00
9605	0	0.00	0	0.00
9606	0	0.00	0	0.00
9607	0	338.40	0	157.88
9608	0	333.26	0	154.99
9609	0	317.62	0	147.25
9610	0	323.22	0	149.38
9611	0	308.04	0	141.91
9612	0	313.48	0	143.96
9701	0	308.72	0	141.33
9702	0	274.61	0	125.32
9703	0	299.41	0	136.21
9704	0	285.35	9	129.40
9705	305	290.39	141	131.27
9706	321	276.75	122	124.72
9707	358	281.63	167	126.52
9708	377	277.36	236	124.20
9709	333	264.33	220	118.00
9710	375	269.00	250	119.70
9711	389	256.37	301	113.72
9712	412	260.89	116	115.36
9801	0	256.93	0	113.25
9802	0	228.54	0	100.42
9803	0	249.18	0	109.15
9804	0	237.48	0	103.70

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DATE	Oil Vol Prod bbls	FORECASTED OIL VOLUME bbls	Gas Vol Prod Mscf	FORECASTED GAS VOLUME Mscf
9805	0	241.67	0	105.20
9806	0	230.32	0	99.94
9807	0	234.39	0	101.38
9808	0	230.83	0	99.53
9809	0	219.99	0	94.56
9810	0	223.87	0	95.92
9811	0	213.36	0	91.13
9812	0	217.12	0	92.45
9901	0	213.82	0	90.76
9902	0	190.20	0	80.47
9903	0	207.38	0	87.47
9904	0	197.64	0	83.10
9905	0	201.13	0	84.30
9906	0	191.68	0	80.09
9907	0	195.07	0	81.24
9908	0	192.10	0	79.76
9909	0	183.08	0	75.77
9910	0	186.31	0	76.87
9911	0	177.56	0	73.03
9912	0	180.70	0	74.08
10001	0	177.95	0	72.73
10002	0	163.94	0	66.79
10003	0	172.59	0	70.09
10004	0	164.48	0	66.59
10005	0	167.39	0	67.55
10006	0	159.53	0	64.18
10007	0	162.34	0	65.10
10008	0	159.88	0	63.91
10009	0	152.37	0	60.72
10010	0	155.06	0	61.60
10011	0	147.78	0	58.52
10012	0	150.38	0	59.37
10101	0	148.10	0	58.28
10102	0	131.74	0	51.68
10103	0	143.64	0	56.17
10104	0	136.89	0	53.36
10105	0	139.31	0	54.13
10106	0	132.76	0	51.43
10107	0	135.11	0	52.17
10108	0	133.05	0	51.22
10109	0	126.81	0	48.66
10110	0	129.04	0	49.36
10111	0	122.99	0	46.90
10112	0	125.15	0	47.57
10201	0	123.25	0	46.70
10202	0	109.64	0	41.41
10203	0	119.54	0	45.01
10204	0	113.93	0	42.76
10205	0	115.94	0	43.38
10206	0	110.49	0	41.21

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DATE	Oil Vol Prod bbls	FORECASTED OIL VOLUME bbls	Gas Vol Prod Mscf	FORECASTED GAS VOLUME Mscf
10207	0	112.44	0	41.81
10208	0	110.73	0	41.04
10209	0	105.53	0	38.99
10210	0	107.40	0	39.56
10211	0	102.35	0	37.58
10212	0	104.16	0	38.12
10301	0	102.58	0	37.43
10302	0	91.24	0	33.19
10303	0	99.48	0	36.07
10304	0	94.81	0	34.27
10305	0	96.49	0	34.76
10306	0	91.96	0	33.03
10307	0	93.58	0	33.50
10308	0	92.16	0	32.89
10309	0	87.83	0	31.25
10310	0	89.38	0	31.70
10311	0	85.18	0	30.11
10312	0	86.68	0	30.55
10401	0	85.37	0	29.99
10402	0	78.65	0	27.54
10403	0	82.80	0	28.90
10404	0	78.91	0	27.46
10405	0	80.30	0	27.86
10406	0	76.53	0	26.47
10407	0	77.88	0	26.85
10408	0	76.70	0	26.36
10409	0	73.10	0	25.04
10410	0	74.38	0	25.40
10411	0	70.89	0	24.13
10412	0	72.14	0	24.48
10501	0	71.05	0	24.03
10502	0	63.20	0	21.31
10503	0	68.91	0	23.16
10504	0	65.67	0	22.01
10505	0	66.83	0	22.32
10506	0	63.69	0	21.21
10507	0	64.81	0	21.51
10508	0	63.83	0	21.12
10509	0	60.83	0	20.07
10510	0	61.91	0	20.36
10511	0	59.00	0	19.34
10512	0	60.04	0	19.62
10601	0	59.13	0	19.26
10602	0	52.59	0	17.08
10603	0	57.35	0	18.56
10604	0	54.65	0	17.63
10605	0	55.62	0	17.89
10606	0	53.01	0	16.99
10607	0	53.94	0	17.24
10608	0	53.12	0	16.93

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DATE	Oil Vol Prod bbls	FORECASTED OIL VOLUME bbls	Gas Vol Prod Mscf	FORECASTED GAS VOLUME Mscf
10609	0	50.63	0	16.08
10610	0	51.52	0	16.31
10611	0	49.10	0	15.50
10612	0	49.97	0	15.72
10701	0	49.21	0	15.43
10702	0	43.77	0	13.68
10703	0	47.73	0	14.87
10704	0	45.48	0	14.13
10705	0	46.29	0	14.33
10706	0	44.11	0	13.62
10707	0	44.89	0	13.82
10708	0	44.21	0	13.56
10709	0	42.13	0	12.89
10710	0	42.88	0	13.07
10711	0	40.86	0	12.42
10712	0	41.58	0	12.60
10801	0	40.95	0	12.37
10802	0	37.73	0	11.36
10803	0	39.72	0	11.92
10804	0	37.85	0	11.32
10805	0	38.52	0	11.49
10806	0	36.71	0	10.91
10807	0	37.36	0	11.07
10808	0	36.79	0	10.87
10809	0	35.07	0	10.33
10810	0	35.68	0	10.47
10811	0	34.01	0	9.95
10812	0	34.61	0	10.10
10901	0	34.08	0	9.91
10902	0	30.32	0	8.79
10903	0	33.06	0	9.55
10904	0	31.50	0	9.07
10905	0	32.06	0	9.21
10906	0	30.55	0	8.75
10907	0	31.09	0	8.87
10908	0	30.62	0	8.71
10909	0	29.18	0	8.27
10910	0	29.70	0	8.39
10911	0	28.30	0	7.97
10912	0	28.80	0	8.09
11001	0	28.37	0	7.94
11002	0	25.23	0	7.04
11003	0	27.51	0	7.65
11004	0	26.22	0	7.27
11005	0	26.68	0	7.38
11006	0	25.43	0	7.01
11007	0	25.88	0	7.11
11008	0	25.48	0	6.98
11009	0	24.29	0	6.63
11010	0	24.72	0	6.73

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DATE	Oil Vol Prod bbls	FORECASTED OIL VOLUME bbls	Gas Vol Prod Mscf	FORECASTED GAS VOLUME Mscf
11011	0	23.56	0	6.39
11012	0	23.97	0	6.48
11101	0	23.61	0	6.36
11102	0	21.00	0	5.64
11103	0	22.90	0	6.13
11104	0	21.82	0	5.83
11105	0	22.21	0	5.91
11106	0	21.16	0	5.62
11107	0	21.54	0	5.70
11108	0	21.21	0	5.59
11109	0	20.21	0	5.31
11110	0	20.57	0	5.39
11111	0	19.60	0	5.12
11112	0	19.95	0	5.19
11201	0	19.65	0	5.10
11202	0	18.10	0	4.68
11203	0	19.05	0	4.92
11204	0	18.16	0	4.67
11205	0	18.48	0	4.74
11206	0	17.61	0	4.50
11207	0	17.92	0	4.57
11208	0	17.65	0	4.48
11209	0	16.82	0	4.26
11210	0	17.12	0	4.32
11211	0	16.31	0	4.10
11212	0	16.60	0	4.16
11301	0	16.35	0	4.09
11302	0	14.54	0	3.62
11303	0	15.86	0	3.94
11304	0	15.11	0	3.74
11305	0	15.38	0	3.80
11306	0	14.66	0	3.61
11307	0	14.92	0	3.66
11308	0	14.69	0	3.59
11309	0	14.00	0	3.41
11310	0	14.25	0	3.46
11311	0	13.58	0	3.29
11312	0	13.82	0	3.34
11401	0	13.61	0	3.28
11402	0	12.10	0	2.90
11403	0	13.20	0	3.16
11404	0	12.58	0	3.00
11405	0	12.80	0	3.04
11406	0	12.20	0	2.89
11407	0	12.41	0	2.93
11408	0	12.23	0	2.88
11409	0	11.65	0	2.73
11410	0	11.86	0	2.77
11411	0	11.30	0	2.64
11412	0	11.50	0	2.67

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DATE	Oil Vol Prod bbls	FORECASTED OIL VOLUME bbls	Gas Vol Prod Mscf	FORECASTED GAS VOLUME Mscf
11501	0	11.32	0	2.62
11502	0	10.07	0	2.33
11503	0	10.98	0	2.53
11504	0	10.47	0	2.40
11505	0	10.65	0	2.44
11506	0	10.15	0	2.32
11507	0	10.33	0	2.35
11508	0	10.17	0	2.31
11509	0	9.70	0	2.19
11510	0	9.87	0	2.22
11511	0	9.40	0	2.11
11512	0	9.57	0	2.14
11601	0	9.42	0	2.10
11602	0	8.68	0	1.93
11603	0	9.14	0	2.03
11604	0	8.71	0	1.93
11605	0	8.87	0	1.95
11606	0	8.45	0	1.86
11607	0	8.60	0	1.88
11608	0	8.47	0	1.85
11609	0	8.07	0	1.76
11610	0	8.21	0	1.78
11611	0	7.83	0	1.69
11612	0	7.96	0	1.72
11701	0	7.84	0	1.69
11702	0	6.98	0	1.49
11703	0	7.61	0	1.62
11704	0	7.25	0	1.54
11705	0	7.38	0	1.57
11706	0	7.03	0	1.49
11707	0	7.16	0	1.51
11708	0	7.05	0	1.48
11709	0	6.72	0	1.41
11710	0	6.83	0	1.43
11711	0	6.51	0	1.36
11712	0	6.63	0	1.38