



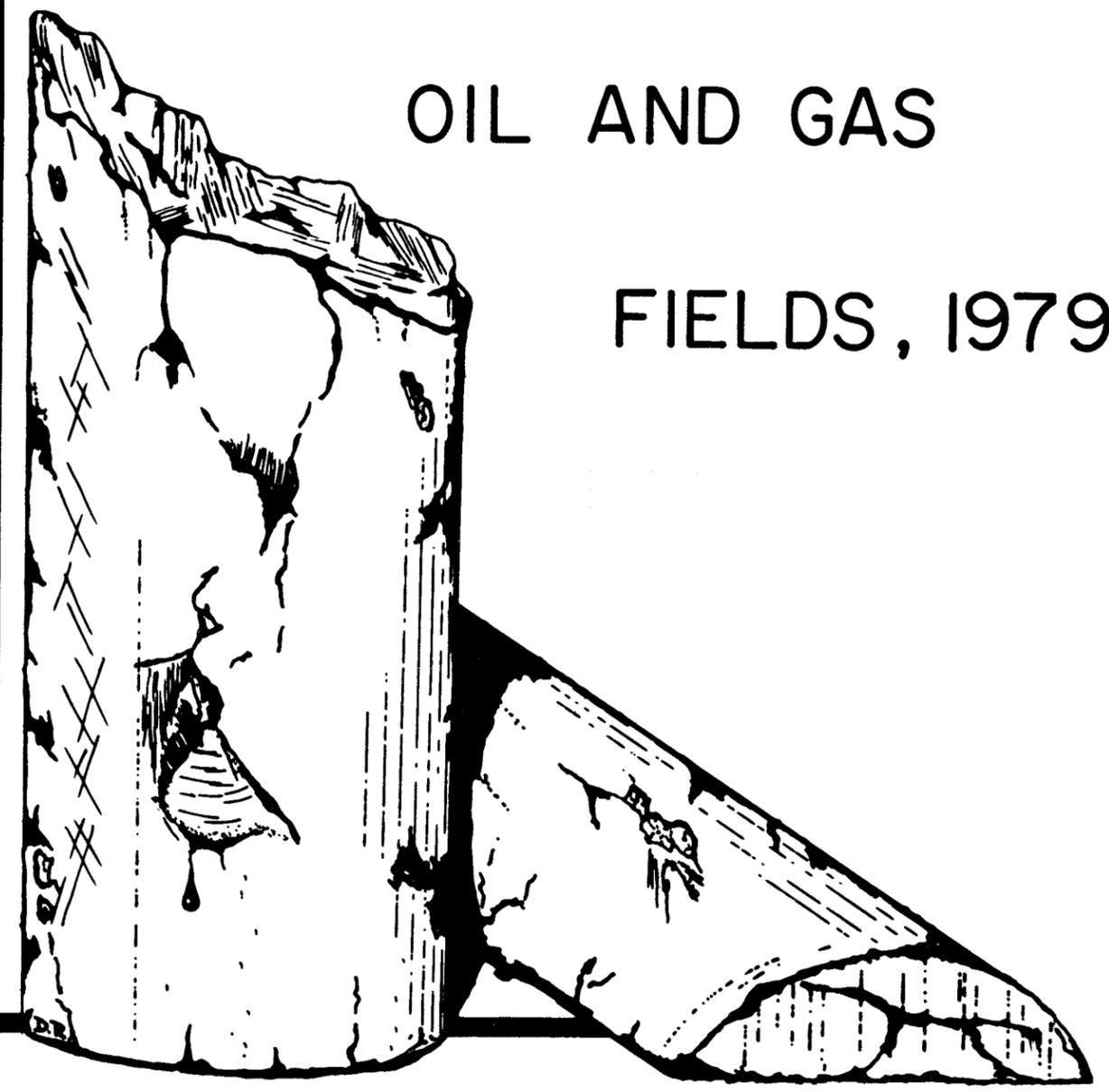
Annual Statistical Summary 32

drilling statistics  
production  
exports and imports

# MICHIGAN'S

## OIL AND GAS

### FIELDS, 1979



1980

Department of Natural Resources  
Geological Survey Division

CONTENTS

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Summaries are numbered with consecutive even  
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Summaries.

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Stratigraphic Succession in Michigan . . . . .	Inside Back Cover

The collection and compilation of oil and gas field data into a yearly report is a cooperative effort of the Geological Survey Division's Oil and Gas Section staff personnel who are under the general supervision of James S. Lorenz, Geologist-in-Charge. Additional data were contributed by field office personnel under the supervision of Regional Geologists in DNR Regions II and III. Unit supervisors who provided specific information are:

Samuel L. Alguire, Supervisor, Regulatory Control Unit.  
Contribution: All data in columns under the headings "Number of Oil and Gas Wells" and "Brine Production" on Tables 2, 3, and 4.

Floyd L. Layton, Supervisor, Production-Proration Unit.  
Contribution: All Michigan oil and gas production data, oil and gas valuation figures, import and export figures, LPG and condensate figures, secondary recovery projects (Table 5, Compiler: Arthur D. Matzkanin), and refineries.

Garland D. Ells, Supervisor, Subsurface and Petroleum Geology Unit. Contribution: All general drilling statistics and well completion data, discovery well and deep test data, cumulative records, and all other summary information not specifically provided by other Unit supervisors or by other agencies. Annual Statistical Summary compilation and manuscript preparation by staff members of the Subsurface and Petroleum Geology Unit.

The compilers also acknowledge the assistance of the Interstate Supply personnel, Office of Utilities Operation, Gas Division, Department of Commerce, in providing figures on natural gas imports via interstate pipelines, and the Lands Division, Department of Natural Resources, in providing figures for state revenue derived from various oil and gas transactions.

Michigan oil and gas production figures maintained by the Production-Proration Unit are compiled by the Unit from records obtained from the Michigan Department of Treasury and from records filed by producers and purchasers. All hydrocarbon production figures cited herein are subject to correction as warranted.

Inquiries concerning information contained in this publication should be directed to the appropriate Unit supervisor as noted earlier.

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Lansing, Michigan  
October, 1980

INTRODUCTION

To help foster the development of Michigan's hydrocarbon resources, statistical data have been maintained and published for many years. This issue of the oil and gas field statistical summary brings together information on various facets of Michigan's oil and gas industry activities. Certain indices which show the trend of these activities from year to year are shown in chart form along with figures from prior years. Other charts reflect cumulative data and other historical information useful in oil and gas field evaluation.

The information contained in this oil and gas summary has been treated as uniformly as possible from year to year so that the data reflect accurately the actual figures and other information that should be credited to this year. The data found herein are mainly derived from records maintained by the Oil and Gas Section, Geological Survey Division, Department of Natural Resources.

This publication is essentially divided into three parts. The first summarizes significant statistics on oil and gas field activities and includes numerous other related records kept by the Oil and Gas Section. Part 2 contains specific information on Michigan's oil and gas fields, gas storage fields, and other related subjects. Part 3 contains cumulative records important to the oil and gas industry.

Certain well completion data are furnished to the American Petroleum Institute (API) and the American Association of Petroleum Geologists (AAPG) on a regular basis. Reports citing preliminary oil and gas statistics and production figures are also prepared for the Interstate Oil Compact Commission (IOCC). API publishes the data in monthly and quarterly reports. Year-end printouts of the data are made available to authors of the AAPG yearly Development Papers and to others. Year-end figures published by API are in general agreement with figures for similar categories published in this summary. Oil and gas production data are supplied by request to the United States Bureau of Mines for publication in their minerals yearbook.

Statistical data on Michigan oil and gas activities, derived from outside sources, are also published by the Oil and Gas News, Mt. Pleasant, Michigan; Petroleum Information, Incorporated, Denver, Colorado; American Petroleum Institute, Washington, D.C.; American Association of Petroleum Geologists, Tulsa, Oklahoma; Interstate Oil Compact Commission, Oklahoma City, Oklahoma; World Oil, Houston, Texas; and Oil and Gas Journal, Tulsa, Oklahoma.

It should be noted that certain figures for the number of exploratory, development, and service wells drilled and completed, the number of new fields and pools discovered, oil and gas production figures, and other data published in this summary may differ from figures reported by regional or national trade publications or by industry reporting services. The differences in the various statistics are generally minor and are due to methods of gathering and reporting well data, determining cutoff dates for reporting yearly statistics, and the necessity for making projections and estimates for certain types of reports.

Other factors which may result in statistical differences are internal decisions of the Oil and Gas Section regarding final year-end status of completed wells and decisions resulting from public hearings on

oil and gas matters. For example, a well originally classified as a development well, and reported as such to one of the above organizations, may later be reclassified as the discovery well for a new pool or field, or a gas well might later be declared an oil well completion on the basis of new evidence. Frequently the changes in well status cannot be readily passed on to these outside organizations so that their records can be updated prior to publication of their final statistics. The discrepancies in year-end figures are almost without exception related to Niagaran reef exploration and development which has formed the largest part of Michigan drilling activities for the past several years.

PART I

1979 STATISTICAL DATA

\*\*\* OIL AND GAS PERMITS \*\*\*

Michigan's oil and gas permit system began in 1927 with the issuance of permit number 1. Since then, permit numbers have been issued in numerically consecutive order. In many cases, wells which have been previously drilled and abandoned have been reopened and reworked under a new permit number. Also, some well locations for which permit numbers were issued but later terminated have been repermited and assigned new permit numbers. Permits issued under Act 61, P.A. of 1939, as amended are terminated one year after date of issue if actual drilling operations have not begun.

Oil and gas drilling permits issued during 1979 began with permit number 32797 and ended with permit number 33445. The initial classification of wells to be drilled under these permits was as follows:

INITIAL CLASSIFICATION	1977	1978	1979
Exploratory wells . . . . .	338	311	282
Development wells . . . . .	296	298	283
Gas storage facility wells . . . . .	51	74	62
LPG storage facility wells . . . . .	2	0	5
Brine disposal wells . . . . .	5	3	5
Water injection wells . . . . .	0	4	12
	692	690	649

The distribution of oil and gas drilling permits (including terminated permits) according to districts (see oil and gas district map) through a five year period is as follows:

DISTRICTS	DRILLING PERMITS BY DISTRICT				
	Permits Issued				
	1975	1976	1977	1978	1979
Basin	100	110	135	146	161
Northern	219	221	261	284	271
Southeastern	70	98	111	98	63
Southwestern	108	73	67	47	60
Western	156	143	118	115	94
Totals	653	645	692	690	649

Deepening permits were issued for 29 wells during 1979 as compared with 25 the previous year. Deepening permits issued in 1979 began with number 1942 and ended with number 1970.

Permit numbers terminated in 1979

D.P.1938	32405	32617	32685
31478	32430	32618	32686
32028	32449	32632	32687
32100	32491	32641	32696
32118	32493	32652	32698
32166	32504	32653	32709
32172	32539	32657	32710
32206	32572	32664	32717
32270	32588	32666	32737
32290	32599	32668	32772
32315	32606	32669	32776
32333	32608	32676	32785
32359	32609	32677	
32373	32615	32684	

Directionally drilled holes. Environmental and economic considerations have necessitated the drilling of a large number of directional holes since 1972, particularly to help locate Niagara reefs. During 1979, there were 142 permits issued to drill directional holes. Many of these holes involve using the upper part of a previously drilled hole which, after being initially completed as a dry hole, was plugged back and directionally drilled to a more favorable subsurface location. Only one producing well is allowed per well bore, regardless of the number of holes directionally drilled from the same well bore.

Each new directional hole, even if drilled from the same surface location and using the upper part of a previously drilled well, is treated as a separate test and is assigned its own unique permit number. Each additional hole drilled from the same surface location retains the same well name and number as the original hole, except that the suffix "A", "B", "C" etc., is added to the well number for each successive hole.

Permit numbers issued in 1979 for directional holes

32580	Gd. Traverse County	33169	Otsego County
32587	Otsego County	33172	Presque Isle County
32614	Gd. Traverse County	33175	Otsego County
32699	Manistee County	33176	Otsego County
32797	Gd. Traverse County	33177	Otsego County
32798	Kalkaska County	33178	Otsego County
32800	Manistee County	33179	Otsego County
32820	Otsego County	33186	Calhoun County
32821	Otsego County	33187	Kalkaska County
32822	Calhoun County	33190	Kalkaska County
32824	Macomb County	33198	Presque Isle County
32831	Manistee County	33199	Kalkaska County
32833	Manistee County	33201	Calhoun County
32834	Manistee County	33203	Manistee County
32837	Otsego County	33206	Montmorency County
32838	Manistee County	33209	Presque Isle County
32840	Kalkaska County	33212	Otsego County
32843	Otsego County	33221	Gd. Traverse County
32844	Manistee County	33223	Manistee County
32845	Manistee County	33236	Manistee County
32855	Calhoun County	33245	Otsego County
32857	Manistee County	33247	Otsego County
32863	Livingston County	33249	Kalkaska County
32874	Gd. Traverse County	33254	Presque Isle County
32879	Gd. Traverse County	33258	Jackson County
32884	Gd. Traverse County	33265	Manistee County
32885	Kalkaska County	33267	St. Clair County
32886	Calhoun County	33289	Manistee County
32891	Otsego County	33290	Gd. Traverse County
32893	Manistee County	33297	Kalkaska County
32894	Manistee County	33302	Mason County
32898	Kalkaska County	33305	Eaton County
32899	Manistee County	33308	Otsego County
32903	Kalkaska County	33315	Gd. Traverse County
32905	Kalkaska County	33319	Kalkaska County

32907	Otsego County	33324	Otsego County
32912	Gd. Traverse County	33337	Kalkaska County
32914	Manistee County	33343	Crawford County
32934	Macomb County	33345	Manistee County
32936	Gd. Traverse County	33346	Gd. Traverse County
32937	Eaton County	33349	Manistee County
32939	Presque Isle County	33354	Ingham County
32947	St. Clair County	33366	Crawford County
32957	Manistee County	33367	Montmorency County
32962	Manistee County	33375	Montmorency County
32967	Calhoun County	33376	Kalkaska County
32973	Antrim County	33379	Gd. Traverse County
32983	Wexford County	33384	Gd. Traverse County
33003	Wexford County	33392	Crawford County
33031	Oakland County	33407	Gd. Traverse County
33033	Manistee County	33411	Manistee County
33048	Kalkaska County	33412	Kalkaska County
33049	Cheboygan County	33416	Manistee County
33050	Presque Isle County	33418	Presque Isle County
33053	Presque Isle County	33419	Gd. Traverse County
33057	Oakland County	33422	Montmorency County
33063	Gd. Traverse County	33423	Otsego County
33074	Gd. Traverse County	33429	Kalkaska County
33092	Kalkaska County	33430	Kalkaska County
33093	Kalkaska County	33432	Kalkaska County
33094	Kalkaska County	33433	Kalkaska County
33095	Kalkaska County	33435	Kalkaska County
33096	Kalkaska County	33437	Kalkaska County
33100	Oakland County	33438	Kalkaska County
33106	Presque Isle County	33439	Kalkaska County
33107	Manistee County	33440	Kalkaska County
33108	Manistee County	33441	Kalkaska County
33133	Macomb County	33443	Kalkaska County
33144	Manistee County	33444	Otsego County
33145	Otsego County	33445	Manistee County
33146	Crawford County		
33154	Oceana County		

Rework applications, transfers of ownership, etc. In addition to issuance of permits for various types of wells covered under Act No. 61, P.A. of 1939, as amended, 195 applications were received and approved for rework operations on existing wells. Letters of termination were sent out for 54 previously issued permits. Transfers of ownership were processed for 131 wells. Corrections of location, well name, or other detail involving specific permits were made for 62 wells, and cancel and transfer of permit were made for 28 others. The surface location as well as the projected bottom-hole location is published for each permitted directionally drilled hole. After the well is drilled and the directional survey is filed, the correct bottom-hole location is determined from the survey record and then published as a correction for the initial projected bottom-hole location. Corrections of this type were published for 110 wells.

Oil and gas hearings. Oil and Gas Section activities included scheduling and preparation for hearings on oil and gas matters and the issuance of orders resulting from these hearings. These activities are summarized as follows:

Advisory Board Hearings held	4
Administrative Hearings held	27
Total Orders issued	27
Total Causes heard	36
Includes:	
2 changes in well allowables under Special Order 1-78	
2 spacing and proration orders	
7 exceptions to spacing orders	
4 compulsory pooling orders	
3 causes dismissed	
3 unitization orders	
5 secondary recovery by waterflood and pressure maintenance by gas injection	
1 amendment to spacing and proration order	
4 abrogations of spacing orders	
2 spacing orders denied	
1 amendment to spacing order denied	
1 conversion to gas storage and exception under spacing order	
1 exception to General Rules spacing requirements	

\*\*\* WELL COMPLETIONS \*\*\*

There were 521 new-hole exploratory and development wells which reached total depth and were considered either completed producers with production casing set, or dry holes during 1979. The 521 wells considered as completed during the past year do not include service wells, old wells drilled to deeper objectives, or reworked wells. Well completion figures for individual counties are shown in Table 1. The fluctuation in the number of new-hole completions and the resulting number of oil, gas, or dry holes over a five year period is as follows:

Year	Exploratory Wells			Development Wells			Totals
	Oil	Gas	Dry	Oil	Gas	Dry	
1975	53	17	213	112	21	117	533
1976	30	36	234	90	21	99	510
1977	35	36	230	101	34	111	547
1978	29	25	214	117	32	111	528
1979	42	28	187	131	30	103	521

There were 68 new-hole service well completions in 1979. The figure does not include reworked wells or old wells converted to gas storage facility wells.

Year	GS	INJ	LPG	BDW	Totals
1975	37	0	0	1	38
1976	25	13	0	12	50
1977	43	2	1	4	50
1978	60	11	0	3	74
1979	51	13	0	4	68

Major and independent company well completions. Requests are frequently made for statistics on major oil company drilling activities in Michigan. The figures cited for the major companies do not include wells drilled by independents under farmout agreements with a major company or wells drilled by independents but partially supported by dry hole money or some other significant assistance from a major oil company. Independent oil companies, who have drilled most of Michigan's wells, are too numerous to cite individually. All figures cited for majors and independents were derived from inspection of operator names appearing on completion records. On the following chart, in cases where two or more companies were joint operators in a drilling venture, the well completion was attributed to the company whose name appears first (generally the major interest holder) on the official records. Although there appears to be no single definition of what constitutes a major company, the following companies are frequently cited as belonging in that category: Atlantic-Richfield, Cities Service, Continental Oil Company, Exxon, Getty Oil Company, Gulf Oil Company, Marathon Oil Company, Mobil Oil Corporation, Phillips Petroleum Company, Shell Oil Company, Standard Oil of California, Standard Oil of Indiana, Standard Oil of Ohio, Sun Oil Company, Texaco, Inc., and Union Oil of California. The preceding list is not official nor necessarily complete. A number of these companies or their affiliates drilled wells in Michigan this year.

Major Company	Exploratory			Development			Service Wells	Totals
	Oil	Gas	Dry	Oil	Gas	Dry		
Amoco	5	4	25	8	2	6	0	50
Getty	1	2	0	1	0	0	0	4
Gulf	0	0	1	0	0	0	0	1
Marathon	0	0	0	6	0	2	6	14
Shell	7	6	32	15	4	28	7	99
Sun	0	0	0	19	0	0	0	19
Union	0	0	1	1	0	1	0	3
Sub-totals	13	12	59	50	6	37	13	190
Independents	29	16	128	81	24	66	55	399
Totals	42	28	187	131	30	103	68	589

Total: Exploratory Wells 257; Development Wells 264; Service Wells 68.

Exploratory Wells drilled by Majors 33%.  
Exploratory Wells drilled by Independents 67%.

Exploratory Discoveries made by Majors 36%.  
Exploratory Discoveries made by Independents 64%.

Development Wells drilled by Majors 35%.  
Development Wells drilled by Independents 65%.

Producing Development Wells drilled by Majors 35%.  
Producing Development Wells drilled by Independents 65%.

Discovery Success Ratio (Total exploratory wells divided by number of discovery wells)--Majors 1:3; Independents 1:4.

NEW WELL COMPLETIONS BY DISTRICT, 1979

Classification of New Well Completions	Basin		Northern		Western		Southwestern		Southeastern		Totals	
	1978	1979	1978	1979	1978	1979	1978	1979	1978	1979	1978	1979
Exploratory Wells												
Oil	4	12	15	17	7	4	3	3	0	6	29	42
Gas	2	6	13	11	6	8	3	0	1	3	25	28
D&A	22	27	118	102	27	23	18	17	29	18	214	187
Total	28	45	146	130	40	35	24	20	30	27	268	257
Development Wells												
Oil	45	56	34	26	20	23	11	13	7	13	117	131
Gas	1	3	15	13	8	9	7	1	1	4	32	30
D&A	14	10	40	44	31	30	9	11	17	8	111	103
Total	60	69	89	83	59	62	27	25	25	25	260	264
Service												
WI	9	6	2	6	0	1	0	0	0	0	11	13
BDW	1	3	1	1	1	0	0	0	0	0	3	4
GS	27	24	0	0	5	3	0	0	28	24	60	51
LPG	0	0	0	0	0	0	0	0	0	0	0	0
Total	37	33	3	7	6	4	0	0	28	24	74	68
Total Completions	125	147	238	220	105	101	51	45	83	76	602	589

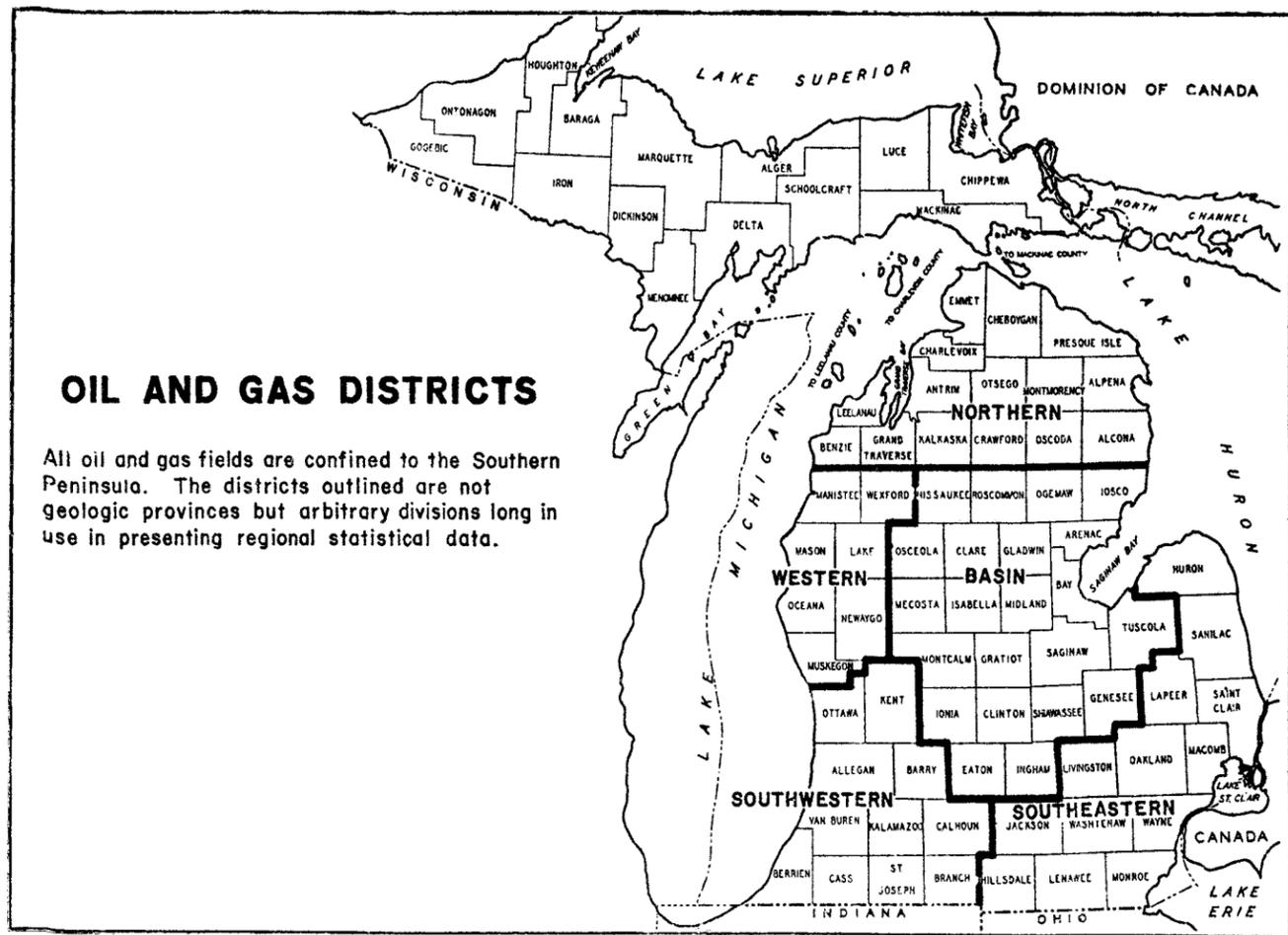
Drilled footage. The average depth of exploratory wells drilled in Michigan in 1979 was 4,461 feet compared with 4,558 feet in 1978. Development well depths averaged 4,359 feet compared with 4,524 feet in 1978. Service wells drilled in 1979 averaged 2,982 feet as compared with 3,091 feet in 1978. Drilled footage figures and average well depths for specific counties are shown in Table 1.

Total drilled footage figures from the Geological Survey Division records for 1979 and several prior years are as follows:

Well Class	DRILLED FOOTAGE FIGURES			
	1976	1977	1978	1979
Exploratory	1,448,933	1,474,814	1,220,144	1,146,515
Development	913,530	1,068,429	1,117,482	1,150,710
Service Wells	105,975	91,492	228,768	202,791
Total	2,468,438	2,634,735	2,566,394	2,500,016

Well casing used in 1979 well completions. Periodically, inquiries are made concerning the amount of casing (pipe) used in Michigan wells during a given year. Almost all oil and gas tests drilled in this state utilize rotary drilling techniques and require the setting of surface pipe and an intermediate casing string. A conductor pipe is set on many holes, and all wells completed as producers require a string of production casing. For convenience, casing tallies have been related to a range of casing sizes as shown in the following chart.

	Conductor Pipe	Surface Pipe	Intermediate Pipe	Production Pipe
Casing Size Range Used	13"-20" Dia.	10"-13" Dia.	6"-10" Dia.	4"-6" Dia.
Normal Size Used	16"	11-3/4"	8-5/8"	5-1/2"
Average Weight	75#/ft.	53#/ft.	37#/ft.	19#/ft.
No. feet used (1)	27,715	232,135	1,105,754	1,322,769
(1) Total footage:	2,688,373			

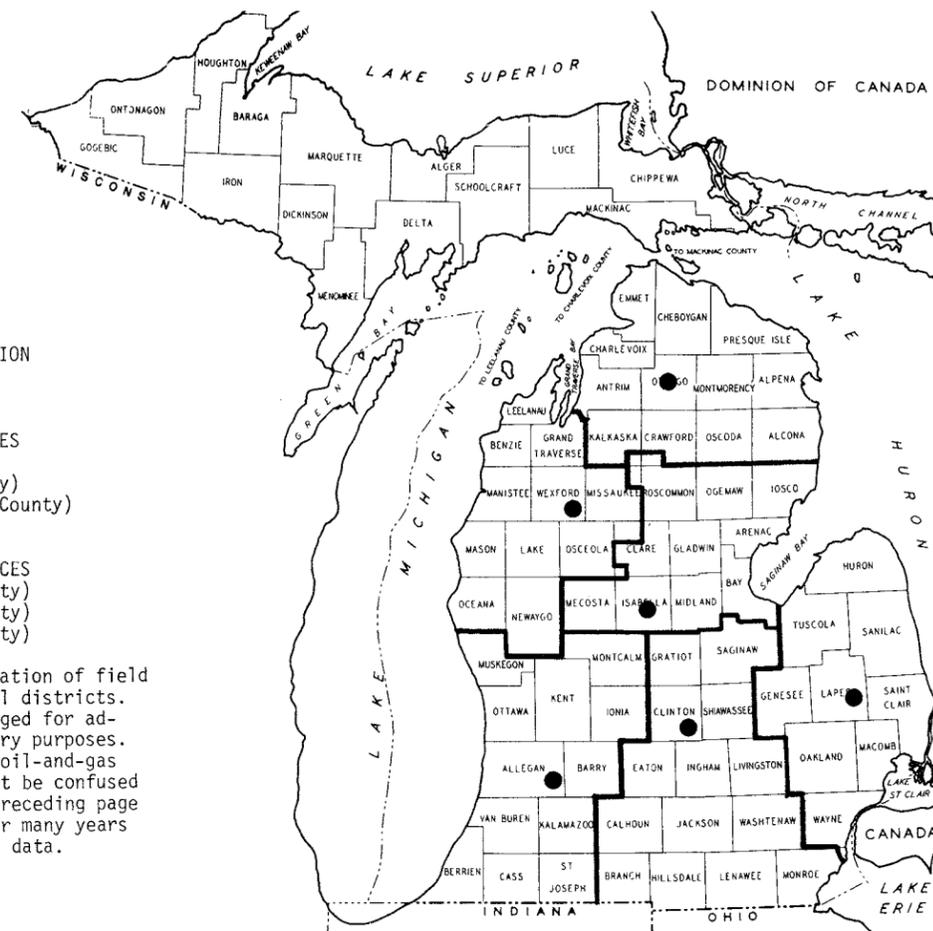


GEOLOGICAL SURVEY DIVISION

DNR REGION II FIELD OFFICES  
 Gaylord (Otsego County)  
 Cadillac (Wexford County)  
 Mt. Pleasant (Isabella County)

DNR REGION III FIELD OFFICES  
 Rose Lake (Clinton County)  
 Plainwell (Allegan County)  
 Imlay City (Lapeer County)

Dots show the general location of field offices within the several districts. These districts are arranged for administrative and regulatory purposes. Though frequently called oil-and-gas districts, they should not be confused with those shown on the preceding page which have been in use for many years in presenting statistical data.



Oil and gas production figures are derived from records submitted to the Production-Proration Unit, Oil and Gas Section, Geological Survey Division, Department of Natural Resources and from tax records from the Michigan Department of Treasury. Treasury Department records are primarily concerned with gross production figures needed to calculate revenues. These data are supported by reports required from producing companies and purchasers by the Geological Survey Division.

Delays in reporting and changes in methods of reporting used by producing companies and purchasers result in a continuous correction and refinement of production figures. Consequently all monthly, yearly, or other production figures are subject to correction as warranted.

In an attempt to obtain national uniformity of data as recommended by the Interstate Oil Compact Commission, all annual and cumulative gas production figures for Michigan were converted to a standard base pressure for volumetric measurement of 14.73 pounds per square inch in 1978. This conversion and subsequent adjustment of gas production figures resulted in slight changes in cumulative production volumes in those fields which had been measured at varying pressure bases in prior years.

A no-flare order, enacted as a conservation measure, prohibits the flaring of oil-well gas and requires Salina-Niagaran oil wells in specified counties to be shut-in until a market connection is achieved for the sale of the gas or an exception to the order is granted. Consequently, Special Order No. 3-71, amended, in effect since late 1971, tends to temporarily curtail production from Salina-Niagaran oil wells until gas gathering pipelines are laid and connections made.

Another order, Special Order No. 1-73, deals with spacing and proration of Salina-Niagaran wells in specific counties. This order established basic 80-acre drilling units (either stand-up or lay-down units) for Salina-Niagaran oil and/or gas wells and state-wide proration for Salina-Niagaran oil reservoirs in the specified counties or parts of counties covered by the order. These prudent and justifiable conservation measures effectively prevent waste of millions of cubic feet of valuable and much needed gas that might have been flared in past years, and these measures should ultimately result in more efficient drainage of reef reservoirs and a greater recovery of the liquid hydrocarbons.

OIL AND GAS PRODUCTION BY DISTRICT IN 1979

District	Barrels Oil	MCF Gas
Basin	5,430,832	8,424,845
Northern	16,529,272	94,461,961
Southeastern	1,616,089	10,318,212
Southwestern	1,095,111	4,536,699
Western	9,629,213	41,210,063
Totals	34,746,672	157,293,719

OIL AND GAS PRODUCTION BY MONTH IN 1979

	Barrels Oil	MCF Gas
January	2,930,736	11,992,231
February	2,628,667	12,017,012
March	2,972,379	13,387,671
April	2,821,969	13,005,853
May	3,039,459	13,692,802
June	2,849,858	13,677,723
July	3,038,348	14,586,087
August	2,859,245	14,255,070
September	3,124,414	13,115,573
October	2,928,933	13,564,162
November	2,794,277	11,907,616
December	2,858,640	14,491,058
Totals	34,746,672	157,293,719

OIL AND GAS PRODUCTION BY COUNTY IN 1979

County	Barrels Oil	MCF Gas
Allegan	144,968	56,856
Antrim	185,789	756,919
Arenac	189,294	0
Barry	6,162	0
Bay	191,255	0
Benzie	108,355	98,816
Calhoun	817,321	4,353,303
Cass	17,723	0
Cheboygan	3,931	0
Clare	471,295	424,107
Crawford	1,542,332	3,456,516
Eaton	398,985	4,169,961
Genesee	8,996	0
Gladwin	274,100	0
Grand Traverse	4,525,299	47,375,339
Gratiot	9,002	93
Hillsdale	788,418	2,749,854
Ingham	1,233,150	2,603,852
Isabella	207,029	14,417
Jackson	37,605	1,792,859
Kalamazoo	404	0
Kalkaska	3,882,057	27,262,410
Kent	88,077	0
Lake	84,238	0
Lapeer	155,591	0
Lenawee	151	0
Livingston	3,887	1,236,174
Macomb	7,009	2,736,974
Manistee	8,460,019	34,961,685
Mason	211,936	2,035,360
Mecosta	23,346	10,302
Midland	194,782	0
Missaukee	883,227	876,676
Monroe	3,198	0
Montcalm	78,131	0
Montmorency	1,375	0
Muskegon	8,029	0
Newaygo	16,620	0
Oakland	7,128	39,062
Oceana	109,739	0
Ogemaw	645,198	120,255
Osceola	177,799	10,280
Oscoda	732	0
Otsego	6,278,046	15,511,961
Ottawa	6,681	126,540
Presque Isle	1,356	0
Roscommon	352,533	194,902
Saginaw	14,178	0
Shiawassee	13,365	0
St. Clair	604,559	1,710,034
Tuscola	65,117	0
Van Buren	13,775	0
Washtenaw	0	53,255
Wayne	8,543	0
Wexford	738,632	4,213,018
Totals	34,746,672	157,293,719

\*\*\* NATURAL GAS LIQUIDS \*\*\*

The amount of liquids produced from gas-condensate reservoirs associated with northern and western Michigan Silurian reefs decreased during 1979. These liquids, produced from wells classified as gas wells, are included in the yearly oil production totals shown in tabulations in this publication. Wells officially determined to be gas wells are assigned to the Public Service Commission for well connection permits and determination and jurisdiction of gas production rates. There is no restriction on the amount of liquids produced along with the gas. Gas plants operated by Shell Oil Company and Amoco Production Company in Kalkaska County strip natural gas liquids from the gas. The liquids are then sold to another company through the Shell pipeline that terminates at Marysville, Michigan.

An attempt has been made to maintain records of condensate production from the northern reef reservoirs discovered since 1969. Production-Proration Unit records show the following figures for condensate liquids:

CONDENSATE PRODUCTION	
Year	Barrels
1969	0
1970	18,946
1971	98,668
1972	125,768
1973	335,041
1974	1,187,498
1975	1,863,338
1976	1,896,870
1977	1,991,330
1978	2,295,263
1979	1,801,928
Total	11,614,650

Gas plant operations are summarized in Table 6. It should be noted that the LPG recovery figures for the Amoco and Shell plants in Kalkaska County include stabilized condensate as well as LPGs.

\*\*\* OIL AND GAS VALUATION \*\*\*

Year	Average Wellhead Price*		Gross Value*	
	Oil per Bbls.	Gas per MCF	Oil	Gas
1969	\$ 3.07	\$ .26	\$ 37,494,318	\$ 9,296,332
1970	3.10	.27	36,246,376	10,476,482
1971	3.27	.26	38,858,706	6,775,629
1972	3.20	.31	41,556,432	10,314,222
1973	4.07	.40	59,412,710	17,494,727
1974	8.55	.51	154,746,373	35,181,955
1975	10.74	.63	262,351,653	65,103,875
1976	10.84	.88	329,636,770	120,252,528
1977	10.95	1.10	360,994,743	145,969,976
1978	12.34	1.11	427,881,248	166,920,524
1979	14.94	1.75	524,257,112	279,121,269

\*Source: Production-Proration Unit records

\*\*\* OIL AND GAS IMPORTS AND EXPORTS \*\*\*

Michigan refineries import some U.S. domestic and foreign crude oil each year. Overseas foreign sources include Libya and Nigeria. Canadian crude oil brought via pipeline from western Canada oil fields constitutes another important source of imports. Imports by month were reported by refineries as follows:

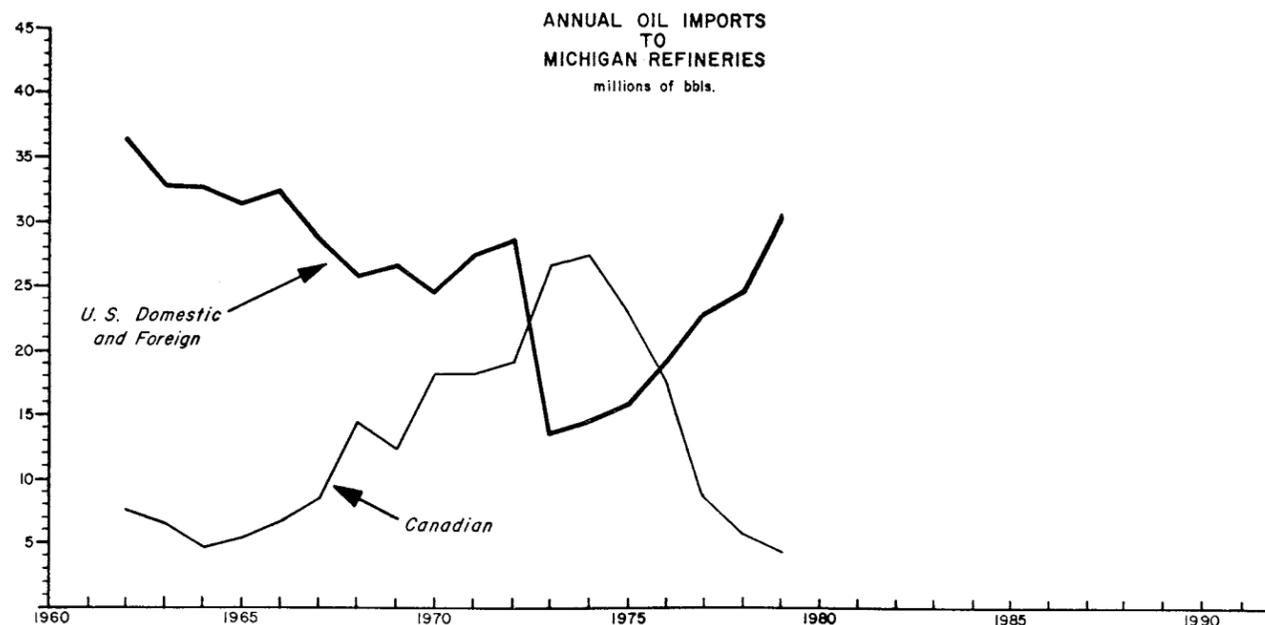
	1979 CRUDE OIL IMPORTS (Bbls.)		
	Domestic and Foreign	Canadian	Total
January	2,676,515	534,202	3,210,717
February	2,310,534	870,826	3,181,360
March	2,071,141	1,009,897	3,081,038
April	2,391,424	626,393	3,017,817
May	2,373,874	287,359	2,661,233
June	2,698,890	293,650	2,992,540
July	3,163,746	202,631	3,366,377
August	2,750,567	121,163	2,871,730
September	2,228,178	129,655	2,357,833
October	2,423,965	244,724	2,668,689
November	2,924,019	168,114	3,092,133
December	2,731,865	328,788	3,060,653
Total	30,744,718	4,817,402	35,562,120

Most Michigan produced crude oil goes to Michigan refineries but some is exported. Records provided to the Production-Proration Unit by companies reporting exports of Michigan crude are as follow:

1979 CRUDE OIL EXPORTS (Bbls.)	
January	447,718
February	637,661
March	1,051,741
April	593,700
May	727,083
June	551,035
July	735,739
August	307,040
September	621,274
October	712,896
November	480,739
December	530,260
Total	7,396,886

1979 PIPELINE GAS IMPORTS (Mcf)*	
January	67,433,456
February	58,459,015
March	76,150,694
April	78,684,100
May	61,086,186
June	58,545,457
July	63,708,449
August	60,876,867
September	58,201,433
October	63,558,588
November	61,125,432
December	59,967,337
Total	767,797,014

\*Compiled by Interstate Supply Section, Michigan Public Service Commission



\*\*\* NEW FIELD AND POOL DISCOVERIES \*\*\*

Once again Silurian reefs were the main type of oil and gas trap found this year. All appear to have been located by seismic exploration methods. Most were found along the northern reef trend extending from Mason County to Presque Isle County. Others were found in the southern part of the basin in the Calhoun-Eaton-Ingham County area, and in the Macomb-St. Clair County area of the Southeastern District.

All the new discoveries are tentatively classified as Class E pools having possible oil and gas recoveries as defined by the Committee of Statistics of Drilling, American Association of Petroleum Geologists. These classes, shown below, are used to give some estimate or measure of reserves found by a discovery well.

- Class A - Over 50 million barrels oil or 300 BCF gas
- Class B - 25-50 million barrels oil or 150-300 BCF gas
- Class C - 10-25 million barrels oil or 60-150 BCF gas
- Class D - 1-10 million barrels oil or 6-60 BCF gas
- Class E - 1 million barrels or less oil, or less than 6 BCF gas
- Class F - Abandoned as non-profitable

Michigan wells are initially classified as near as possible according to guidelines established by AAPG and API (AAPG Bulletin, Vol. 58/8, August 1974, pp. 1501-1503). Classifications such as exploratory, development, and the various types of service wells, are made after inspection of appropriate oil and gas maps and noting the location of the test in reference to established fields, dry holes, etc. Gas storage facility wells, water injection wells and other types of service wells are generally designated as such by the operator. The Lahee classification system for designating exploratory or development wells is particularly adaptable to structural traps but does not adapt to all situations involving small reefs such as are found in Michigan. Because of the apparent small areal extent of most reefs as shown by seismic anomalies and the close proximity of one reef to another, especially in the northern and southern reef belts, it has become increasingly difficult to classify with certainty all new well locations as exploratory or development.

Reservoir performance may show that a well previously classified as a development well should actually be considered as being in a separate reservoir or pool. Likewise, a so-called discovery well may actually turn out to be a development well to a nearby reef reservoir. Also, a discovery well may be completed as an oil well but at sometime later be reclassified as a gas well and conversely, a gas well may later be reclassified as an oil well. Changes in classification may be the result of action by the regulating agency after enough data has been accumulated on the well or wells, or may result from new data presented at public hearings and the decision of the Supervisor of Wells after thorough consideration of the new data.

ANALYSIS OF DISCOVERY WELLS BY GEOLOGIC SYSTEM

System	Formation or Pay	Number of Discoveries		
		1977	1978	1979
Pennsylvanian		-	-	-
Mississippian	"Michigan Stray Ss."	-	1	-
	"Berea Sandstone"	-	1	2
Devonian	Antrim Shale	3	-	1
	"Traverse Lime"	1	1	2
	Dundee	-	2	4
	"Reed City"	-	-	-
	Detroit River	-	-	-
	"Sour Zone"	-	-	2
	Richfield	1	-	1
Silurian	Salina E Zone	-	-	-
	Salina A-1 or A-2	1	2	1
	Niagaran reef	65	47	55
Ordovician	Trenton-Black River	-	-	2
	Prairie du Chien	-	-	-
Cambrian	(Gas shows reported in past years)	-	-	-

DRILLING OBJECTIVES IN MICHIGAN

System	Formation or Pay	Percentage		
		1977	1978	1979
Pennsylvanian		-	-	-
Mississippian	"Michigan Stray Ss."	7.7	8.9	4.8
	"Berea Sandstone"	-	.2	.8
Devonian	Antrim Shale	.7	-	1.0
	"Traverse Lime"	4.2	2.4	3.4
	Dundee	6.7	5.8	7.1
	"Reed City"	.2	.9	-
	Detroit River	-	-	-
	"Sour Zone" & Richfield	2.7	7.7	11.0
Silurian	Salina-Niagaran	70.5	69.6	69.1
Ordovician	Trenton-Black River	5.9	3.4	2.6
	St. Peter Ss. or	-	-	-
	Prairie du Chien	1.1	1.1	.2
Cambrian or Precambrian	Undifferentiated	.3	-	-

\*\*\* STATE OIL AND GAS REVENUE \*\*\*

Total State revenue credited to 1979 and derived from royalty, rental, bonus from lease sales, and application-assignment fees amounted to \$26,785,584.81. This figure is derived from these components.

Hydrocarbon royalties	
Oil & Condensate . . . . .	\$15,195,114.46
Gas, Casinghead gas, LPG and	
Shut-in royalty . . . . .	9,074,449.82
Subtotal . . . . .	\$24,269,564.28
Rentals . . . . .	1,100,306.53
Bonus . . . . .	1,414,667.00
Application-Assignment fees . . . . .	1,047.00
Subtotal . . . . .	\$2,516,020.53
Total Revenue . . . . .	\$26,785,584.81

\*\*\* WELL RECORDS AND OIL AND GAS MAPS \*\*\*

OIL AND GAS WELL RECORDS. Descriptive geological logs and driller's logs are available for over 33,000 tests, including exploratory, development, facility and other types of wells. Individual well records may be purchased at a nominal cost from the Geological Survey Division. Electric or radiation logs of any type are not available for distribution or sale.

OIL AND GAS FIELD MAPS. Blueprint copies of oil and gas field maps are available for every county in the Southern Peninsula. The maps show locations of oil and gas test but do not show geological data or structural contour lines. County map scales are 1" = 1 mile. Blueprint field maps are available for many oil and gas fields. These maps show well locations, well permit numbers, operators and lease names. They do not show geological data or structural contour lines. Field map scales are mainly 4" = 1 mile. All manuscript maps or tracings from which blueprint copies are made are posted on a regular basis. An oil and gas field maps list may be obtained from the Geological Survey Division upon request.

1979 DISCOVERY WELLS

County Location	Field Name	Operator and Lease	Permit Number	Depth to Pay	Total Depth	Initial Production		Producing Formation	Basis for Loc.	AAPG Pool Class
						Oil Wells	Gas Wells			
Calhoun 27-15-4W	Clarence 27-15-4W	Reef Petroleum Corp. F. P. Schmidt #1-27	33128	3193	3297	Est. 400 BOPD		Niagaran	Seis.	E
Calhoun 23-15-5W	Lee 23-15-5W	J. O. Mutch D. C. Lutz et al #1-23	33045	3120	3323	175 BOPD +360 Mcf		Salina-Niagaran	Seis.	E
Cheboygan 24-33N-1E	Forest 24-33N-1E	Shell Oil Co. St.-Forest #2-24A	33049*	3607	3997	Gauge not available		Niagaran	Seis.	E
Cheboygan 34-33N-1E	Forest 34-33N-1E	Traverse Corporation Nat'l Bank of Detroit #1-34	33015	4158	4490	460 BOPD +300 Mcf		Niagaran	Seis.	E
Eaton 2-1N-4W	Brookfield 2-1N-4W	Kulka & Schmidt, Inc. Sederlund Unit #1-2	32990	3740	4123	200 BOPD		Niagaran	Seis.	E
Eaton 17-2N-3W	Eaton Rapids 17-2N-3W, Pool A	Amoco Production Co. Getter #3-17	33026	4062	4371	300 Cond./Day +1630 Mcf		Niagaran	Seis.	E
Eaton 32-2N-3W	Eaton Rapids 32-2N-3W, Pool A	Consumers Power Co. Hanks #1-32	32457	3751	3997	858 Mcf		Salina-Niagaran	Seis.	E
Eaton 4-1N-3W	Hamlin 9-1N-3W	Kulka & Schmidt & Mich. Oil Co. Hausch et al Unit #1-4	32937*	3711	3839	SIGW-Gauge not available		Niagaran	Seis.	E
Eaton 15-1N-3W	Hamlin 15-1N-3W	Consumers Power Co. Lawrence-Tomlin #1-15	32458	3608	3825	5076 Mcf		Niagaran	Seis.	E
Eaton 24-1N-6W	Olivet-A-1 Carbonate Pool	Fortuna Oil Co. J. C. Kellogg #3-24	32191	3444	5004	200 Mcf		A-1 Carb.	Acreeage	E
Gladwin 36-18N-1W	Buckeye, South-Berea Pool	Wiser Oil Co. Havens #5	32980	2196	2305	10 BOPD +10 BWD		Berea	Acreeage	E
Gladwin 34-18N-1E	Hay, Sec. 34	C. W. Kughn Reid #1-34	33180	2210	4130	7 BOPD +85 BWD		Berea	Acreeage	E
Grand Traverse 28-26N-11W	Blair 28-26N-11W	North. Mich. Exp. Co. Wedow-St-Blair #1-28	33012	5550	5840	168 BOPD +205 Mcf + 270 BWD		Niagaran	Seis.	E
Grand Traverse 14-26N-10W	East Bay 14-26N-10W	Total Petroleum, Inc. St-East Bay #1-14	33192	6095	6400	241 BOPD +391 Mcf		Salina-Niagaran	Seis.	E
Grand Traverse 22-25N-12W	Grant 22-25N-12W, Pool A	Reef Petroleum Corp. Fryzelka #1-22	32913	5946	6200	365 BOPD +560 Mcf		Niagaran	Seis.	E
Grand Traverse 27-25N-11W	Paradise 27-25N-11W, Pool A	Shell Oil Co. Hill Estate #3-27A	32912*	6464	6755	60 Cond./Day +3038 Mcf		Niagaran	Seis.	E
Grand Traverse 8-25N-10W	Paradise 8-25N-10W	Delta Oil & Gr. Lks. Niagaran Haight-Rawlins #1-8	33219	6551	6603	SIGW-Gauge not available		Niagaran	Seis.	E
Grand Traverse 17-25N-10W	Paradise 17-25N-10W	Shell Oil Co. Chavalia #1-17	33153	6451	6769	173 BOPD +716 Mcf + 29 BWD		Niagaran	Seis.	E
Grand Traverse 20-26N-10W	Paradise 20-26N-10W, Pool A	Finders Oil & Gas Co. Cunningham #1-20	33101	5786	6087	312 BOPD +600 Mcf + 12 BWD		Niagaran	Seis.	E
Grand Traverse 27-26N-10W	Paradise 27-26N-10W, Pool A	Finders Oil & Gas Co. Cunningham-St-Paradise #1-27	32543	6317	6584	40 Cond./Day +850 Mcf		Niagaran	Seis.	E
Grand Traverse 28-26N-10W	Paradise 28-26N-10W	Finders Oil & Gas Co. Tuller #1-28	33123	6000	6470	30 Cond./Day +600 Mcf		Niagaran	Seis.	E
Grand Traverse 18-26N-9W	Union 18-26N-9W, Pool A	Shell Oil Co. St-Union #3-18A	32773*	6232	6436	117 Cond./Day +3096 Mcf		Niagaran	Seis.	E
Grand Traverse 20-27N-9W	Whitewater 20-27N-9W, Pool A	Shell Oil Co. St-Whitewater #1-20	32438	6149	6360	285 BOPD +495 Mcf		Niagaran	Seis.	E
Grand Traverse 20-27N-9W	Whitewater 20-27N-9W, Pool B	Shell Oil Co. St-Whitewater #2-20	32932	5962	6455	120 BOPD +760 Mcf + 123 BWD		Niagaran	Seis.	E
Ingham 24-2N-2W	Aurelius 24-2N-2W	Petrotech Inc. Akers et al #1-24	32742	3966	4080	250 BOPD		Niagaran	Seis.	E
Ingham 24-2N-2W	Aurelius 24-2N-2W, Pool A	Petrotech Inc. Lyon #1-24	33284	3978	4166	1 Cond./Day +800 Mcf		Salina-Niagaran	Seis.	E
Isabella 14-14N-6W	Broomfield-Traverse Pool	Lewis C. Sibley Harris Diehl #1-A	32955	3173	3190	30 BOPD		Traverse	Acreeage	E
Isabella 9-14N-6W	Broomfield-Dundee Pool	Don Yohe Enterprises Lake Isabella Corp. #1-9	33102	3752	3756	15 BOPD +15 BWD		Dundee	Acreeage	E
Isabella 24-13N-6W	Rolland-Dundee Pool	Chase Oil Corp. Wonsey #1-24	32931	3560	3755	25 BOPD +25 BWD		Dundee	Acreeage	E
Jackson 7-15-1E	Henrietta	Total Petroleum Inc. Faist-Kelly-Luck #1-7	32714	5060	5653	33 BOPD +74 Mcf + 1 BWD		Trenton	Seis.	E
Kalamazoo 23-15-11W	Cooper	Petrotech Inc. H. A. Nagel, Jr. #1-23	32639	2308	2870	30 BOPD		B Unit	Seis.	E
Kalkaska 5-28N-5W	Blue Lake 5-28N-5W	Energy Acquisition Corp. St-Hayden #1-5	32538	6630	6793	480 BOPD +500 Mcf		Niagaran	Seis.	E
Kalkaska 13-28N-5W	Blue Lake 13-28N-5W, Pool A	Amoco Production Co. St-Blue Lake "F" #2-13	32960	7014	7193	300 BOPD +297 Mcf		Niagaran	Seis.	E
Kalkaska 19-28N-5W	Blue Lake 19-28N-5W, Pool B	Amoco Production Co. Lachniet-St-Blue Lake Unit #4-19	32532	6970	7280	300 BOPD		Niagaran	Seis.	E
Kalkaska 21-28N-5W	Blue Lake 21-28N-5W	Muskegon Development Co. LaMotte & Batson #2-21	32419	7200	7295	40 Cond./Day +1500 Mcf		Niagaran	Seis.	E
Kalkaska 34-28N-5W	Blue Lake 34-28N-5W	Getty Oil Co. Brown #2-34	32988	7036	7558	24 Cond./Day +800 Mcf		Niagaran	Seis.	E



Part 2 brings together general information on Michigan's oil and gas fields, gas storage reservoirs, LPG storage facilities, gas plant operations, refinery facilities and other items.

TABLES 2, 3 and 4 list Michigan's oil and gas fields and gas storage reservoirs. The symbol on the left margin of the table indicates the official classification of fields and pools at the end of the year. Classifications may be changed as warranted. Official field names are listed alphabetically in the first column and the producing pool, or pools, are shown under the heading Producing Formation or Pool. Most fields consist of one pool with oil or gas production coming from a single reservoir within a formation. Some fields have two or more separate pools, each producing from a different formation or stratigraphic interval and at a different depth. Most multi-pool fields are associated with a common structural feature. Salina-Niagaran reef oil or gas accumulations are mostly single-pool fields. Some, however, have several separate reef reservoirs designated as Pool A, Pool B and so on. Most have been so designated by administrative action following public hearings. Also, a few of the listed fields actually consist of two or more hydrocarbon accumulations which for administrative purposes have been consolidated under one field name.

Location of fields according to township, range and sections are found at the bottom of the field block. The listed sections are those which have, or have had, producing wells assigned to the field or pool. The geographic location of fields and pools can be found by township and range on the center-spread oil and gas field map. Due to space limitations, all field names are not shown on the map.

The Pay Zone part of the table generally refers to data for the discovery well for the field or pool. The indicated pay thickness relates to the amount of pay opened or perforated in the discovery well and does not necessarily indicate total net or gross pay for the reservoir.

The Deepest Formation or Pool Tested column indicates the stratigraphically oldest formation penetrated and the deepest total depth reached beneath the field area. Data in these columns are updated periodically.

The Number of Wells column indicates the number of successful field wells drilled in the field to the end of the specified year, the number completed as producing wells during the specified year, the number abandoned during the year and the number of active wells at the end of the specified year.

The Drilled Acres column indicates the total number of acres assigned to the field or pool according to individual well drilling units assigned to each producing well completed in the field or pool. Except as provided by special orders covering drilling units, rules promulgated under Act No. 61, P.A. of 1939, as amended, call for a minimum 40-acre unit consisting of a governmental quarter-quarter section of land. Special Order No. 1-73 calls for basic 80-acre drilling units for Salina-Niagaran or deeper tests in specified areas of the state. These 80-acre units are formed by two governmental quarter-quarter sections of land having a common boundary of approximately 1320 feet. In past years drilling units have been 10, 20 or 40 acres for oil wells. A field may have had a 10 or 20-acre drilling unit for one pool and a 40-acre unit for a deeper formation pool. During the development of a field or pool the drilling unit size may change. Subsequent wells are assigned acreage values in accordance with the new unit size. Gas well units, especially for Michigan Stray Sandstone reservoirs, have generally been 160-acre units. Other sizes currently in use for gas wells are 40, 80, 320 and 640-acre units, or a unit size based on seismic and reservoir data. Reef reservoirs, especially in the northern reef trend, have been assigned 80, 160, 640, or a

unit based on seismic data. Changes in drilling units, off-pattern wells, etc., complicate the maintenance of accurate figures during the lifetime of a given field or pool.

Recovery Per Acre Drilled figures for oil pools are derived by dividing the cumulative production figure by the drilled acres figure.

Gas Fields, Gas-Condensate Fields. Some fields are listed as "shut-in" and show no production figures. In the case of Niagaran reef fields classified as gas-condensate reservoirs, virtually all those listed as shut-in at the end of the year were waiting pipeline construction or gas-handling facilities. Others, mainly small dry-gas reservoirs in shallower formations, are listed as shut-in because of slow field development, small reserves or lack of marketing facilities. Other fields, not considered to have commercial-size gas accumulations, produce small quantities of unmetered gas which is used for domestic purposes and in some cases, lease fuel.

GAS STORAGE RESERVOIRS. Most gas storage reservoirs were originally classified as gas fields or pools. Upon depletion or near depletion of native gas they were converted to storage reservoirs. The producing sections listed on gas storage reservoir tables do not necessarily relate to current gas storage area or boundaries. The sections or parts of sections listed are those which contained at least one producible oil or gas well assigned to the field or pool prior to conversion to gas storage operations. Further, the listed sections do not necessarily relate to potential or future gas storage area or boundary. The table listing undeveloped gas storage reservoirs has been discontinued.

LPG STORAGE. Surface and underground storage facilities for liquified petroleum gas.

OIL WELL GAS. This is casinghead gas produced incidental to the production of oil from pools or fields generally classified as oil accumulations.

NATURAL GAS LIQUIDS (CONDENSATE). Natural gas liquids are those portions of reservoir gas which are liquified at the surface in lease separators, field facilities, or gas processing plants. These liquids include but are not limited to: ethane, propane, butanes, pentanes, natural gasoline and condensate. On Tables 2 and 3 of this report, condensates from Michigan gas-condensate fields are shown under the oil production column.

WELL SAMPLE SETS. Well cuttings for over 9,000 wells are available for inspection at the Geological Survey Division, Michigan Department of Natural Resources, Lansing. Samples are contained in glass vials arranged in open trays. In addition, several thousand shallow geological test samples are also available for inspection. The Division does not maintain a core collection. Other sample and core repositories, not connected with the Division, are located at:

Subsurface Laboratory, Department of Geology, The University of Michigan, Ann Arbor, Michigan.

Department of Geology, Wayne State University, Detroit, Michigan.

Department of Geology, Western Michigan University, Kalamazoo, Michigan.

Department of Geology, Michigan State University, East Lansing, Michigan.

Department of Geology, Central Michigan University, Mt. Pleasant, Michigan.

TABLE 2 NORTHERN MICHIGAN SALINA-NIAGARAN OIL AND GAS FIELDS

POOL CLASSIFICATION	OF ACTIVE OIL FIELD OR POOL				OF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				G-S GAS STORAGE RESERVOIR							
	FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP	PAY ZONE DEPTH IN FEET	THICKNESS AND LITHOLOGY	OIL GRAVITY & PI	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS TO COMP. IN 1979	ABAND. IN 1979	ACTIVE AT END	DRILLED ACRES	OIL PRODUCTION - BBLs PRODUCED IN 1979	CUMULATIVE THROUGH 1979	GAS PRODUCTION - Mcf PRODUCED IN 1979	CUMULATIVE THROUGH 1979	RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRLS BRINE PER DAY	
<b>ALPENA COUNTY</b>																				
GF	ALPENA 12-31N-BE	A-1 CARBONATE	1973	ALPENA	3,685	22 L		NIAGARAN	3,875	1		ABANDONED 1978	160							
ALPENA TWP., 31N-BE, SECTION 12																				
<b>ANTRIM COUNTY</b>																				
OF	MANCELONA 25-29N-5W	NIAGARAN REEF	1973	ANTRIM	6,449	8 D	33.6	NIAGARAN	6,764	1	0	0	1	80	21,238	232,245		30,495	2,903	5
MANCELONA TWP., 29N-5W, SECTION 25																				
OF	MANCELONA 26-29N-5W	NIAGARAN REEF	1972	ANTRIM	6,499	61 D	40.7	NIAGARAN	6,850	1	0	0	1	80	10,932	181,998		35,116	2,275	95
MANCELONA TWP., 29N-5W, SECTION 26																				
OF	MANCELONA 33-29N-5W	NIAGARAN REEF	1974	ANTRIM	6,538	10 D	44.6	NIAGARAN	6,810	2	0	0	2	80	32,000	93,792	111,617	378,404	1,172	19
MANCELONA TWP., 29N-5W, SECTION 33																				
G-C	MANCELONA 34-29N-5W	NIAGARAN REEF	1974	ANTRIM	6,580	20 D	54	NIAGARAN	6,780	2	1	0	2	80	121,619	721,509	645,302	5,891,791	9,019	25
MANCELONA TWP., 29N-5W, SECTION 34																				
<b>BENZIE COUNTY</b>																				
OF	COLFAX 36-25N-13W	NIAGARAN REEF	1976	BENZIE	5,842	10 D	39.5	NIAGARAN	6,015	2	0	0	2	80	108,355	184,108	98,876	154,466	2,301	20
COLFAX TWP., 25N-13W, SECTION 36																				
<b>CHEBOYGAN COUNTY</b>																				
OF	FOREST 14-33N-1E	NIAGARAN REEF	1976	CHEBOYGAN	3,671	13 D	42.9	NIAGARAN	4,069	4	0	0	4	320		3,073				10
FOREST TWP., 33N-1E, SECTION 14																				
OF	FOREST 24-33N-1E	NIAGARAN REEF	1979	CHEBOYGAN	3,607	77 D		NIAGARAN	4,076	1	1	0	1	80						
FOREST TWP., 33N-1E, SECTION 24																				
OF	FOREST 34-33N-1E	NIAGARAN REEF	1979	CHEBOYGAN	4,158	88 D		NIAGARAN	4,480	1	1	0	1	80		3,931				49
FOREST TWP., 33N-1E, SECTION 34																				
<b>CRAWFORD COUNTY</b>																				
OF	FREDERIC 1-28N-4W	NIAGARAN REEF	1975	CRAWFORD	6,604	30 D	49.8	NIAGARAN	6,880	2	0	0	2	160		588			172	4
FREDERIC TWP., 28N-4W, SECTION 1																				
OF	FREDERIC 2-28N-4W	NIAGARAN REEF	1973	CRAWFORD	6,390	92 D	47.0	NIAGARAN	7,019	3	1	0	3	240	62,764	490,037	160,992	681,597	2,042	
FREDERIC TWP., 28N-4W, SECTION 2																				
OF	FREDERIC 4-28N-4W	NIAGARAN REEF	1974	CRAWFORD	6,923	20 D	45.0	NIAGARAN	7,265	2	0	0	2	160	50,039	334,399	228,055	636,012	2,090	
FREDERIC TWP., 28N-4W, SECTION 4																				
OF	FREDERIC 7-28N-4W	NIAGARAN REEF	1973	CRAWFORD	7,000	10 D	45.6	NIAGARAN	7,161	1	0	0	1	80	18,466	122,826	83,184	341,214	1,535	1
FREDERIC TWP., 28N-4W, SECTION 7																				
OF	FREDERIC 8-28N-4W	NIAGARAN REEF	1974	CRAWFORD	6,740	30 D	43.4	NIAGARAN	7,164	2	0	0	2	160	134,365	667,554	260,699	1,284,043	4,172	8
FREDERIC TWP., 28N-4W, SECTION 8																				
OF	FREDERIC 10-28N-4W	NIAGARAN REEF	1971	CRAWFORD	6,964	99 D	45.0	NIAGARAN	7,350	5	0	0	5	240	249,822	1,459,470	736,457	2,658,710	6,081	
FREDERIC TWP., 28N-4W, SECTION 10																				
OF	FREDERIC 11-28N-4W	NIAGARAN REEF	1976	CRAWFORD	6,963	75 D	47.4	NIAGARAN	7,127	3	0	0	3	240	311,168	819,450	381,901	971,518	3,414	
FREDERIC TWP., 28N-4W, SECTION 11																				
G-C	FREDERIC 13-28N-4W	NIAGARAN REEF	1972	CRAWFORD	6,789	427 D	68.4	NIAGARAN	7,470	1	0	0	1	160	2,960	5,618	38,222	62,920	35	
FREDERIC TWP., 28N-4W, SECTION 13																				
OF	FREDERIC 16-28N-4W	NIAGARAN REEF	1976	CRAWFORD	7,254	19 D	46.1	NIAGARAN	7,483	1	0	0	1	80	16,630	34,070	41,337	131,719	426	
FREDERIC TWP., 28N-4W, SECTION 16																				
G-C	FREDERIC 22-28N-4W	SALINA-NIAGARAN REEF	1973	CRAWFORD	6,950	289 D	65.5	NIAGARAN	7,615	1	0	0	1	160	14,334	22,187	72,678	128,711	139	
FREDERIC TWP., 28N-4W, SECTION 22																				
G-C	FREDERIC 24-28N-4W	NIAGARAN REEF	1977	CRAWFORD	6,991	293 D		NIAGARAN	7,577	1	0	0	1	80		522				7
FREDERIC TWP., 28N-4W, SECTION 24																				
G-C	FREDERIC 27-28N-4W	SALINA-NIAGARAN REEF	1977	CRAWFORD	6,912	108 D		NIAGARAN	7,441	1	0	0	1	160		125		SHUT-IN		1
FREDERIC TWP., 28N-4W, SECTION 27																				
G-C	FREDERIC 29-28N-4W	NIAGARAN REEF	1972	CRAWFORD	7,420	71 D	50.0	NIAGARAN	7,578	4	0	0	3	320	27	1,305	474	474	4	
G-C	FREDERIC 29-28N-4W POOL A	NIAGARAN REEF	1973	CRAWFORD	6,907	260 D	65.0	NIAGARAN	7,535	1	0	0	1	320	48,882	92,424	1,040,767	1,579,965	289	
FREDERIC TWP., 28N-4W, SECTIONS 20, 29																				
G-C	MAPLE FOREST 3-28N-3W	NIAGARAN REEF	1976	CRAWFORD	6,710	12 D		NIAGARAN	7,015	1	0	0	1	160	39,842	40,190	169,323	169,323	251	
MAPLE FOREST TWP., 28N-3W, SECTION 3																				
<b>GRAND TRAVERSE COUNTY</b>																				
OF	BLAIR 14-26N-11W	NIAGARAN REEF	1978	GRAND TRAVERSE	5,767	39 D	47	NIAGARAN	5,930	4	1	0	4	320	15,183	16,960	440,235	494,942	53	
BLAIR TWP., 26N-11W, SECTION 14																				
G-C	BLAIR 21-26N-11W	NIAGARAN REEF	1976	GRAND TRAVERSE	5,567	42 D	67.3	NIAGARAN	5,795	2	0	1	1	160	3,035	18,057	105,675	508,907	113	5
BLAIR TWP., 26N-11W, SECTION 21																				
G-C	BLAIR 22-26N-11W	NIAGARAN REEF	1977	GRAND TRAVERSE	5,592	100 D	68.3	NIAGARAN	5,862	1	0	0	1	80	220	28,966	66,405	932,464	362	
BLAIR TWP., 26N-11W, SECTION 22																				
OF	BLAIR 25-26N-11W	NIAGARAN REEF	1974	GRAND TRAVERSE	5,863	41 D	47.2	NIAGARAN	6,120	2	0	0	2	160	43,303	220,539	243,566	1,052,274	1,378	16
G-C	BLAIR 25-26N-11W POOL A	NIAGARAN REEF	1974	GRAND TRAVERSE	6,225	6 D	46.2	NIAGARAN	6,423	2	0	0	2	160	14,898	92,465	511,974	1,920,618	578	9
BLAIR TWP., 26N-11W, SECTIONS 24, 25, 26																				
G-C	BLAIR 26-26N-11W	NIAGARAN REEF	1975	GRAND TRAVERSE	5,804	76 D	53.0	NIAGARAN	6,035	1	0	0	1	80	1,581	7,275	186,141	516,055	91	
G-C	BLAIR 26-26N-11W POOL A	NIAGARAN REEF	1977	GRAND TRAVERSE	5,930	10 D	55	NIAGARAN	6,110	1	0	0	1	80	6,984	17,016	676,750	1,111,556	213	
BLAIR TWP., 26N-11W, SECTION 26																				
G-C	BLAIR 27-26N-11W	NIAGARAN REEF	1975	GRAND TRAVERSE	5,563	125 D	61.5	NIAGARAN	5,820	1	0	0	1	80	8,663	27,011	262,630	611,790	338	36
BLAIR TWP., 26N-11W, SECTION 27																				
OF	BLAIR 28-26N-11W	NIAGARAN REEF	1979	GRAND TRAVERSE	5,550	56 D	43.4	NIAGARAN	5,845	1	1	0	1	80	928	928				12
BLAIR TWP., 26N-11W, SECTION 28																				

POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL				GF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				GS GAS STORAGE RESERVOIR						
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP			DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS			DRILLED ACRES	OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS BRINE PER DAY			
			PRODUCING SECTIONS	DEPTH IN FEET	THICKNESS AND LITHOLOGY			OIL GRAVITY API	TO END	COMPL. IN		ABAND. IN	ACTIVE AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979			PRODUCED IN 1979	CUMULATIVE THROUGH 1979	
OF BLAIR 33-26N-11W	NIAGARAN REEF	1973	GRAND TRAVERSE	5,244	11 D	45.8	NIAGARAN	6,123	3	0	0	3	240	112,548	771,641	282,752	1,801,888	3,215	43	
BLAIR TWP., 26N-11W, SECTIONS 28, 33																				
G-C BLAIR 34-26N-11W	NIAGARAN REEF	1970	GRAND TRAVERSE	5,826	124 D	60	CLINTON	6,316	2	0	0	2	320	8,625	77,780	454,454	2,903,373	243		
BLAIR TWP., 26N-11W, SECTION 34																				
OF BLAIR 35-26N-11W	NIAGARAN REEF	1975	GRAND TRAVERSE	6,126	58 D	45.0	NIAGARAN	6,320	2	0	0	2	280	22,576	72,080	319,077	814,871	257	9	
BLAIR TWP., 26N-11W, SECTION 35																				
G-C BLAIR 36-26N-11W	NIAGARAN REEF	1972	GRAND TRAVERSE	6,205	14 D	52.0	NIAGARAN	6,405	3	0	0	3	480	3,146	289,386	1,081,793	12,938,645	603		
BLAIR TWP., 26N-11W, SECTION 36 MAYFIELD TWP., 25N-11W, SECTION 1																				
OF EAST BAY 11-26N-10W	NIAGARAN REEF	1976	GRAND TRAVERSE	6,187	11 D	46.2	NIAGARAN	6,400	2	1	0	2	160	75,516	158,368	162,595	396,775	990		
EAST BAY TWP., 26N-10W, SECTION 11																				
OF EAST BAY 16-26N-10W	SALINA-NIAGARAN REEF	1979	GRAND TRAVERSE	6,069	33 D	44.6	NIAGARAN	6,400	1	1	0	1	80	995	995			12		
EAST BAY TWP., 26N-10W, SECTION 14																				
OF EAST BAY 17-26N-10W	NIAGARAN REEF	1977	GRAND TRAVERSE	5,716	18 D	42.7	NIAGARAN	6,020	2	1	0	2	160	60,361	103,930	45,483	75,545	650	18	
EAST BAY TWP., 26N-10W, SECTION 17																				
OF EAST BAY 18-26N-10W	NIAGARAN REEF	1978	GRAND TRAVERSE	5,603	8 D		NIAGARAN	5,866	2	0	0	2	160	109,849	203,437	87,866	161,154	1,271	195	
EAST BAY TWP., 26N-10W, SECTION 18																				
OF EAST BAY 25-27N-10W	SALINA-NIAGARAN REEF	1978	GRAND TRAVERSE	5,930	84 D	33.7	NIAGARAN	6,062	1	0	0	1	80	26,927	39,178	11,444	19,050	490	250	
EAST BAY TWP., 27N-10W, SECTION 25																				
G-C GRANT 1-25N-12W	NIAGARAN REEF	1975	GRAND TRAVERSE	5,807	32 D	67.6	NIAGARAN	6,060	1	ABANDONED 1977	80			36					1	
GRANT TWP., 25N-12W, SECTION 1																				
OF GRANT 3-25N-12W	NIAGARAN REEF	1974	GRAND TRAVERSE	5,353	33 D		NIAGARAN	5,744	1	0	0	1	80	32,978	244,726		34,548	3,059	120	
OF GRANT 3-25N-12W POOL A	NIAGARAN REEF	1977	GRAND TRAVERSE	5,381	12 D	37	NIAGARAN	5,724	1	0	0	1	160	5,319	43,413				146	25
GRANT TWP., 25N-12W, SECTION 3																				
OF GRANT 4-25N-12W	NIAGARAN REEF	1975	GRAND TRAVERSE	5,469	18 D	37.7	NIAGARAN	5,724	1	0	0	1	80	3,872	22,560		32	1,121	282	107
GRANT TWP., 25N-12W, SECTION 4																				
OF GRANT 9-25N-12W	NIAGARAN REEF	1976	GRAND TRAVERSE	5,620	22 D	40.4	NIAGARAN	5,915	2	0	0	2	160	69,253	153,713	210,577	517,266	961	6	
GRANT TWP., 25N-12W, SECTION 9																				
OF GRANT 10-25N-12W	NIAGARAN REEF	1975	GRAND TRAVERSE	5,634	119 D	38.1	NIAGARAN	5,875	2	0	0	2	160	45,191	152,527	58,761	209,606	953	405	
GRANT TWP., 25N-12W, SECTION 10																				
G-C GRANT 12-25N-12W	NIAGARAN REEF	1975	GRAND TRAVERSE	5,767	50 D	67.1	NIAGARAN	6,030	4	1	1	3	240	2,181	109,472	314,500	3,124,585	456	35	
GRANT TWP., 25N-12W, SECTIONS 1, 12 DIRECTIONAL HOLE IN WHICH THE SURFACE LOCATION IS IN GRAND TRAVERSE COUNTY, GRANT TOWNSHIP SECTION 11-25N-12W, AND THE SUBSURFACE LOCATION IS IN GRAND TRAVERSE COUNTY, GRANT TOWNSHIP SECTION 12-25N-12W																				
G-C GRANT 13-25N-12W	NIAGARAN REEF	1974	GRAND TRAVERSE	5,943	54 D	65.0	NIAGARAN	5,192	3	0	0	3	640	12,290	516,516	3,142,937	28,276,349	807		
GRANT TWP., 25N-12W, SECTIONS 13, 14, 23																				
OF GRANT 22-25N-12W	NIAGARAN REEF	1975	GRAND TRAVERSE	5,741	156 D		NIAGARAN	6,188	2	0	0	2	240	188,505	443,360	98,166	207,126	1,847		
OF GRANT 22-25N-12W POOL A	NIAGARAN REEF	1979	GRAND TRAVERSE	5,946	55 L	44	NIAGARAN	6,200	1	1	0	1	80	21,292	21,292	27,978	27,978	266		
GRANT TWP., 25N-12W, SECTION 22 DIRECTIONAL HOLE IN WHICH THE SURFACE LOCATION IS IN GRAND TRAVERSE COUNTY, GRANT TOWNSHIP SECTION 11-25N-12W, AND THE SUBSURFACE LOCATION IS IN GRAND TRAVERSE COUNTY, GRANT TOWNSHIP SECTION 22-25N-12W																				
G-C GRANT 24-25N-12W	SALINA-NIAGARAN REEF	1973	GRAND TRAVERSE	5,815	103 D	71.0	NIAGARAN	6,413	1	0	0	1	80	2,558	67,474	112,527	2,035,955	843		
OF GRANT 24-25N-12W POOL A	NIAGARAN REEF	1974	GRAND TRAVERSE	6,073	89 D	48.7	NIAGARAN	6,366	1	0	0	1	80	5,032	34,993	56,629	387,426	437		
GRANT TWP., 25N-12W, SECTION 24																				
OF GRANT 26-25N-12W	NIAGARAN REEF	1971	GRAND TRAVERSE	5,961	80 D	46.9	CLINTON	6,383	4	0	0	4	240	64,899	320,248	298,125	843,351	1,334	10	
GRANT TWP., 25N-12W, SECTIONS 26, 27																				
OF GRANT 29-25N-12W	NIAGARAN REEF	1973	GRAND TRAVERSE	5,720	82 D	44.3	NIAGARAN	6,135	5	0	0	5	400	169,500	1,056,678	678,135	2,488,239	2,642		
GRANT TWP., 25N-12W, SECTIONS 28, 29																				
OF GRANT 31-25N-12W	NIAGARAN REEF	1975	GRAND TRAVERSE	5,772	106 D		NIAGARAN	6,120	1	ABANDONED 1976	80			1,816					23	
GRANT TWP., 25N-12W, SECTION 31 DIRECTIONAL HOLE IN WHICH THE SURFACE LOCATION IS IN WEXFORD COUNTY, WEXFORD TOWNSHIP SECTION 6-25N-12W, AND THE SUBSURFACE LOCATION IS IN GRAND TRAVERSE COUNTY, GRANT TOWNSHIP SECTION 31-25N-12W																				
G-C GRANT 32-25N-12W	NIAGARAN REEF	1976	GRAND TRAVERSE	5,868	194 D	61	NIAGARAN	6,145	1	0	0	1	80	428	4,457	51,253	339,330	56	2	
GRANT TWP., 25N-12W, SECTION 32																				
G-C GRANT 34-25N-12W	NIAGARAN REEF	1976	GRAND TRAVERSE	6,252	10 D	69	NIAGARAN	6,331	2	0	0	2	160	6,637	70,327	760,975	2,206,620	440		
OF GRANT 34-25N-12W POOL A	NIAGARAN REEF	1976	GRAND TRAVERSE	5,967	218 D	40.8	NIAGARAN	6,267	2	1	0	2	160	51,288	185,664	158,094	318,034	1,160		
GRANT TWP., 25N-12W, SECTION 34																				
G-C GRANT 35-25N-12W	NIAGARAN REEF	1976	GRAND TRAVERSE	6,052	92 D		NIAGARAN	6,337	2	1	0	2	160	10,200	21,007	350,779	723,107	131		
GRANT TWP., 25N-12W, SECTION 35																				
G-C GRANT 36-25N-12W	NIAGARAN REEF	1976	GRAND TRAVERSE	6,129	131 D	64.8	NIAGARAN	6,580	1	0	0	1	80	19,310	19,399	375,453	375,453	242		
GRANT TWP., 25N-12W, SECTION 36																				
OF MAYFIELD 1-25N-11W	NIAGARAN REEF	1974	GRAND TRAVERSE	6,319	14 D	46.0	NIAGARAN	6,447	2	0	0	2	160	65,817	344,294	222,430	1,008,153	2,152		
OF MAYFIELD 1-25N-11W POOL A	NIAGARAN REEF	1974	GRAND TRAVERSE	6,474	16 D	45.2	NIAGARAN	6,634	1	0	0	1	160	108,066	318,810	131,347	495,059	1,993		
MAYFIELD TWP., 25N-11W, SECTIONS 1, 2 *RECLASSIFIED AS A SEPARATE POOL IN 1975																				
G-C MAYFIELD 3-25N-11W	NIAGARAN REEF	1973	GRAND TRAVERSE	5,940	230 D	68.0	NIAGARAN	6,424	1	0	0	1	160	2,415	37,747	33,129	2,257,915	236		
OF MAYFIELD 3-25N-11W POOL A	NIAGARAN REEF	1975	GRAND TRAVERSE	6,019	18 D	49.0	NIAGARAN	6,325	1	0	0	1	80	27,456	199,973	28,046	170,020	2,500		
OF MAYFIELD 3-25N-11W POOL B	NIAGARAN REEF	1975	GRAND TRAVERSE	6,116	22 D	44.4	NIAGARAN	6,259	1	0	0	1	80	22,212	282,593	45,447	406,430	3,532	50	
MAYFIELD TWP., 25N-11W, SECTION 3																				
OF MAYFIELD 4-25N-11W	NIAGARAN REEF	1977	GRAND TRAVERSE	5,961	24 D	42.9	NIAGARAN	6,194	1	0	0	1	80	47,545	175,106	81,802	238,252	2,189	30	
OF MAYFIELD 4-25N-11W POOL A	NIAGARAN REEF	1977	GRAND TRAVERSE	5,847	24 D	42.9	NIAGARAN	6,196	2	1	0	2	160	79,001	164,055	13,349	67,824	1,025	70	
MAYFIELD TWP., 25N-11W, SECTION 4																				
OF MAYFIELD 6-25N-11W	NIAGARAN REEF	1975	GRAND TRAVERSE	5,664	143 D	44	NIAGARAN	5,932	1	0	0	1	80	91,245	328,326	151,350	360,588	4,104		
MAYFIELD TWP., 25N-11W, SECTION 6																				
OF MAYFIELD 9-25N-11W	NIAGARAN REEF	1977	GRAND TRAVERSE	6,088	75 D	46.2	NIAGARAN	6,287	2	0	0	2	240	48,349	144,027	38,416	151,012	600	23	
MAYFIELD TWP., 25N-11W, SECTION 9																				
OF MAYFIELD 10-25N-11W	NIAGARAN REEF	1974	GRAND TRAVERSE	6,283	64 D	47.8	NIAGARAN	6,442	4	0	0	4	320	230,361	972,010	549,407	1,961,214	3,038	62	
OF MAYFIELD 10-25N-11W POOL A	NIAGARAN REEF	1976	GRAND TRAVERSE	6,183	31 D	44.8	NIAGARAN	6,381	2	0	0	2	80	87,547	348,516	38,914	101,488	4,356	60	
MAYFIELD TWP., 25N-11W, SECTION 10																				

POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL				GF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				GS GAS STORAGE RESERVOIR					
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP			DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS			DRILLED ACRES	OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS BRINE PER DAY		
			PRODUCING SECTIONS	DEPTH IN FEET	THICKNESS AND LITHOLOGY			OIL GRAVITY API	TO END	COMPL. IN		ABAND. IN	ACTIVE AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979			PRODUCED IN 1979	CUMULATIVE THROUGH 1979
G-C MAYFIELD 11-25N-11W	NIAGARAN REEF	1976	GRAND TRAVERSE	6,333	75 D	63.9	NIAGARAN	6,540	1	0	0	1	80	150	13,565	56,618	688,917	170	
MAYFIELD TWP., 25N-11W, SECTION 11																			
G-C MAYFIELD 12-25N-11W	SALINA-NIAGARAN REEF	1974	GRAND TRAVERSE	6,171	325 D	60.4	NIAGARAN	6,677	1	0	0	1	160	1,951	53,536	319,213	3,800,614	335	
G-C MAYFIELD 12-25N-11W POOL A	SALINA-NIAGARAN REEF	1975	GRAND TRAVERSE	6,449	43 D	61.5	NIAGARAN	6,685	1	0	0	1	80	3,585	20,922	257,154	1,843,501	262	
MAYFIELD TWP., 25N-11W, SECTION 12 RECLASSIFIED AS A SEPARATE POOL IN 1977 BY ADMINISTRATIVE ACTION																			
G-C MAYFIELD 13-25N-11W	NIAGARAN REEF	1977	GRAND TRAVERSE	6,461	127 D	67.2	NIAGARAN	6,714	2	1	0	2	160	16,220	16,348	557,353	558,264	102	
MAYFIELD TWP., 25N-11W, SECTION 13																			
G-C MAYFIELD 15-25N-11W	NIAGARAN REEF	1976	GRAND TRAVERSE	6,446	134 D		NIAGARAN	6,671	2	0	0	2	160	39,968	173,068	967,211	3,163,043	1,082	
MAYFIELD TWP., 25N-11W, SECTION 15																			
OF MAYFIELD 16-25N-11W	NIAGARAN REEF	1972	GRAND TRAVERSE	6,341	68 D	47.9	NIAGARAN	6,580	3	0	0	3	240	202,906	1,179,890	303,859	1,503,651	4,916	3
OF MAYFIELD 16-25N-11W POOL A	NIAGARAN REEF	1974	GRAND TRAVERSE	6,228	29 D	43.5	NIAGARAN	6,525	2	0	0	2	160	141,940	815,897	84,437	487,236	5,099	
MAYFIELD TWP., 25N-11W, SECTIONS 16, 17																			

POOL CLASSIFICATION				OF ACTIVE OIL FIELD OR POOL				GF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				GS GAS STORAGE RESERVOIR			
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP	PAY ZONE			DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS			OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS BRINE PER DAY		
				DEPTH IN FEET	THICKNESS AND LITHOLOGY	OIL GRAVITY & API			TO END	COMP IN	ABAND IN	ACTIVE AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979			CUMULATIVE THROUGH 1979	
G-C PARADISE 32-26N-10W	NIAGARAN REEF	1974	GRAND TRAVERSE	6,087	231	D	60.0	NIAGARAN	6,582	2	0	0	2	160	1,608	8,550	22,096	104,485	53
PARADISE TWP., 26N-10W, SECTION 32																			
G-C PARADISE 33-26N-10W	NIAGARAN REEF	1975	GRAND TRAVERSE	6,903	202	D	66.5	NIAGARAN	6,627	1	0	0	1	80	64	6,321	35,123	188,690	79
OF PARADISE 33-26N-10W POOL A	SALINA-NIAGARAN REEF	1976	GRAND TRAVERSE	6,000	158	D	50.3	NIAGARAN	6,595	1	0	0	1	80	26,366	42,455	136,896	255,105	531
PARADISE TWP., 26N-10W, SECTION 33																			
G-C PARADISE 34-26N-10W	NIAGARAN REEF	1975	GRAND TRAVERSE	6,332	235	D	70	NIAGARAN	6,808	2	0	0	2	160	1,029	3,870	56,971	222,039	24
PARADISE TWP., 26N-10W, SECTION 34																			
G-C PARADISE 35-26N-10W	NIAGARAN REEF	1978	GRAND TRAVERSE	6,616	56	D	60.9	NIAGARAN	6,762	1	0	0	1	80	17,967	35,437	788,997	1,106,175	443
PARADISE TWP., 26N-10W, SECTION 35																			
G-C UNION 1-26N-9W	NIAGARAN REEF	1972	GRAND TRAVERSE	6,390	78	D		NIAGARAN	6,865	1	0	0	1	160	936	32,392	397,710	4,197,091	202
UNION TWP., 26N-9W, SECTION 1																			
G-C UNION 3-26N-9W	NIAGARAN REEF	1972	GRAND TRAVERSE	6,514	14	D	62.3	NIAGARAN	6,878	4	0	0	4	560	12,683	216,328	2,971,804	13,037,631	386
UNION TWP., 26N-9W, SECTIONS 2, 3, 11																			
G-C UNION 5-26N-9W	NIAGARAN REEF	1973	GRAND TRAVERSE	6,070	19	D	68.2	NIAGARAN	6,440	1	0	0	1	80	4,354	151,315	411,793	4,527,749	1,891
UNION TWP., 26N-9W, SECTION 5																			
OF UNION 6-26N-9W	SALINA-NIAGARAN REEF	1974	GRAND TRAVERSE	5,936	184	D	64.5	NIAGARAN	6,475	2	0	0	2	160	19,781	149,051	615,080	5,680,860	932
UNION TWP., 26N-9W, SECTION 6																			
G-C UNION 8-26N-9W (MUNICIPAL LAKES)	NIAGARAN REEF	1970	GRAND TRAVERSE	6,267	97	D	63.6	NIAGARAN	6,666	2	0	0	2	320	6,266	113,004	1,119,745	9,673,949	353
UNION TWP., 26N-9W, SECTION 8																			
G-C UNION 11-26N-9W	NIAGARAN REEF	1972	GRAND TRAVERSE	6,580	118	D	61.0	NIAGARAN	6,802	1	0	0	1	160	1,592	66,037	327,640	4,641,711	413
UNION TWP., 26N-9W, SECTION 11																			
G-C UNION 12-26N-9W (SOUTH BOARDMAN)	NIAGARAN REEF	1969	GRAND TRAVERSE	6,779	50	D	57.9	NIAGARAN	6,922	2	0	0	2	320	328	5,069	26,683	173,967	16
UNION TWP., 26N-9W, SECTION 12																			
G-C UNION 14-26N-9W	NIAGARAN REEF	1973	GRAND TRAVERSE	6,660	24	D	59.0	NIAGARAN	6,860	1	0	0	1	160	2,603	47,029	687,003	2,943,390	294
UNION TWP., 26N-9W, SECTION 14																			
G-C UNION 16-26N-9W	NIAGARAN REEF	1975	GRAND TRAVERSE	6,207	183	D	58.0	NIAGARAN	6,716	1	0	0	1	80	5,914	39,819	1,142,938	3,158,912	498
G-C UNION 16-26N-9W POOL A	NIAGARAN REEF	1976	GRAND TRAVERSE	6,392	94	D	66	NIAGARAN	6,645	2	0	0	2	160	2,580	38,200	588,811	2,658,792	239
UNION TWP., 26N-9W, SECTION 16																			
G-C UNION 17-26N-9W	NIAGARAN REEF	1978	GRAND TRAVERSE	6,448	20	D	68.8	NIAGARAN	6,540	1	0	0	1	160	1,733	6,345	165,692	520,054	40
UNION TWP., 26N-9W, SECTION 17																			
G-C UNION 18-26N-9W	NIAGARAN REEF	1973	GRAND TRAVERSE	6,298	14	D	59.3	NIAGARAN	6,471	1	0	0	1	80	286	5,245	12,406	283,923	66
G-C UNION 18-26N-9W POOL A	NIAGARAN REEF	1979	GRAND TRAVERSE	6,352	62	L	62.7	NIAGARAN	6,580	1	1	0	1	80	5,141	5,141	121,159	121,159	64
UNION TWP., 26N-9W, SECTION 18																			
G-C UNION 20-26N-9W	NIAGARAN REEF	1978	GRAND TRAVERSE	6,400	80	D	76.2	NIAGARAN	6,731	2	0	1	1	160	25,502	25,760	1,273,428	1,273,428	161
UNION TWP., 26N-9W, SECTION 20																			
G-C UNION 21-26N-9W	NIAGARAN REEF	1978	GRAND TRAVERSE	6,758	22	D	67.3	NIAGARAN	6,889	1	0	0	1	280	29,019	38,339	996,208	1,230,587	137
UNION TWP., 26N-9W, SECTION 21																			
G-C UNION 22-26N-9W	NIAGARAN REEF	1978	GRAND TRAVERSE	6,740	10	D	76.3	NIAGARAN	6,881	1	0	0	1	80	15,325	15,428	1,025,694	1,025,694	193
UNION TWP., 26N-9W, SECTION 22																			
G-C UNION 28-26N-9W	NIAGARAN REEF	1975	GRAND TRAVERSE	6,810	105	D	51.0	NIAGARAN	7,062	1	0	0	1	80	11,584	36,823	1,144,460	1,823,365	460
UNION TWP., 26N-9W, SECTION 28																			
G-C UNION 31-26N-9W	NIAGARAN REEF	1978	GRAND TRAVERSE	6,608	176	D	68.8	NIAGARAN	7,082	1	0	0	1	160		734			5
UNION TWP., 26N-9W, SECTION 31																			
OF WHITEWATER 20-27N-9W	NIAGARAN REEF	1978	GRAND TRAVERSE	6,095	15	D	45.7	NIAGARAN	6,360	1	0	0	1	80	22,548	22,548	65,390	65,390	282
OF WHITEWATER 20-27N-9W POOL A	NIAGARAN REEF	1979	GRAND TRAVERSE	6,149	24	D	45	NIAGARAN	6,360	1	1	0	1	80	80,894	80,894	84,703	84,703	1,011
OF WHITEWATER 20-27N-9W POOL B	NIAGARAN REEF	1979	GRAND TRAVERSE	5,962	17	D	48.3	NIAGARAN	6,455	1	1	0	1	80	2,716	2,716	44,927	44,927	34
WHITEWATER TWP., 27N-9W, SECTION 20																			
G-C WHITEWATER 22-27N-9W	NIAGARAN REEF	1973	GRAND TRAVERSE	6,172	62	D		NIAGARAN	6,516	3	0	0	3	200	40,685	256,837	3,318,168	10,625,313	1,284
WHITEWATER TWP., 27N-9W, SECTION 22																			
OF WHITEWATER 28-27N-9W	NIAGARAN REEF	1975	GRAND TRAVERSE	6,096	22	D	43.8	NIAGARAN	6,310	1	0	0	1	80	47,185	195,627	153,398	522,206	2,445
WHITEWATER TWP., 27N-9W, SECTION 28																			
OF WHITEWATER 32-27N-9W	NIAGARAN REEF	1972	GRAND TRAVERSE	6,100	10	D	44.3	NIAGARAN	6,260	2	0	0	2	160	103,548	876,902	243,392	1,305,191	5,481
WHITEWATER TWP., 27N-9W, SECTION 32																			
OF WHITEWATER 34-27N-9W	NIAGARAN REEF	1972	GRAND TRAVERSE	6,292	16	D	44.9	NIAGARAN	6,580	1	0	0	1	80	4,253	75,099		3,552	
WHITEWATER TWP., 27N-9W, SECTION 34																			
OF WHITEWATER 35-27N-9W	NIAGARAN REEF	1972	GRAND TRAVERSE	6,270	60	D	39	NIAGARAN	6,770	1	0	0	1	80	8,716	146,889		7,020	
WHITEWATER TWP., 27N-9W, SECTION 35																			
G-C WHITEWATER 36-27N-9W	NIAGARAN REEF	1971	GRAND TRAVERSE	6,560	40	D	66	NIAGARAN	6,750	1	0	0	1	40	17	64,158	155,853	5,969,514	1,604
G-C WHITEWATER 36-27N-9W POOL A	NIAGARAN REEF	1976	GRAND TRAVERSE	6,300	334	D	61.9	NIAGARAN	6,757	1	0	0	1	80	2,136	29,633	1,149,909	5,201,973	370
WHITEWATER TWP., 27N-9W, SECTION 36																			
<b>KALKASKA COUNTY</b>																			
OF BLUE LAKE 1-28N-5W	NIAGARAN REEF	1971	KALKASKA	6,481	43	D	43.0	NIAGARAN	6,980	2	0	0	2	160	73,800	950,945	63,052	357,412	5,943
BLUE LAKE TWP., 28N-5W, SECTION 1																			
OF BLUE LAKE 5-28N-5W	NIAGARAN REEF	1979	KALKASKA	6,630	8	D		NIAGARAN	6,793	1	1	0	1	80	26,548	26,548	33,858	33,858	332
BLUE LAKE TWP., 28N-5W, SECTION 5																			
AG-C BLUE LAKE 7-28N-5W	NIAGARAN REEF	1976	KALKASKA	6,615	16	D	51.6	NIAGARAN	6,704	1	ABANDONED	1978	80						
BLUE LAKE TWP., 28N-5W, SECTION 7																			
OF BLUE LAKE 12-28N-5W	NIAGARAN REEF	1971	KALKASKA	6,852	20	D	45.0	NIAGARAN	7,079	2	1	0	2	80	5,167	35,630	30,090	243,102	445
BLUE LAKE TWP., 28N-5W, SECTIONS 12, 13																			

POOL CLASSIFICATION				OF ACTIVE OIL FIELD OR POOL				GF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				GS GAS STORAGE RESERVOIR			
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP	PAY ZONE			DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS			OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS BRINE PER DAY		
				DEPTH IN FEET	THICKNESS AND LITHOLOGY	OIL GRAVITY & API			TO END	COMP IN	ABAND IN	ACTIVE AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979			CUMULATIVE THROUGH 1979	
G-C BLUE LAKE 13-28N-5W	SALINA-NIAGARAN REEF	1973	KALKASKA	6,600	206	D	43	NIAGARAN	7,325	1	0	0	1	80	4,034	63,299	86,873	2,044,844	791
OF BLUE LAKE 13-28N-5W POOL A	NIAGARAN REEF	1979	KALKASKA	7,014	6	L	46	NIAGARAN	7,193	1	1	0	1	80	4,362	4,362	661	661	55
BLUE LAKE TWP., 28N-5W, SECTION 13																			
OF BLUE LAKE 16-28N-5W	NIAGARAN REEF	1977	KALKASKA	7,097	23	D	47.0	NIAGARAN	7,254	1	0	0	1	80	108,948	173,277	115,286	191,070	2,166
OF BLUE LAKE 16-28N-5W POOL A	NIAGARAN REEF	1978	KALKASKA	7,062	8	D	50.5	NIAGARAN	7,213	2	1	0	2	80	21,668	22,036	65,329	65,329	275
BLUE LAKE TWP., 28N-5W, SECTION 16																			
OF BLUE LAKE 17-28N-5W	NIAGARAN REEF	1976	KALKASKA	7,015	62	D	46.7	NIAGARAN	7,255	3	0	0	3	200	302,283	709,943	413,019	835,820	3,550
G-C BLUE LAKE 17-28N-5W POOL A	NIAGARAN REEF	1977	KALKASKA	6,850	30	D	64	NIAGARAN	7,070	1	0	0	1	80	58,891	74,097	1,780,976	2,144,208	926
BLUE LAKE TWP., 28N-5W, SECTION 17																			
OF BLUE LAKE 18-28N-5W	NIAGARAN REEF	1975	KALKASKA	6,960	24	D	44.8	NIAGARAN	7,186	3	0	0	3	240	326,698	782,987	328,793	785,705	3,262
G-C BLUE LAKE 18-28N-5W POOL A	NIAGARAN REEF	1977	KALKASKA	6,885	20	D	60	NIAGARAN	7,089	3	0	0	3	240	52,576	227,800	2,005,710	4,973,856	712
BLUE LAKE TWP., 28N-5W, SECTION 18																			
OF BLUE LAKE 19-28N-5W	NIAGARAN REEF	1974	KALKASKA	6,920	20	D	45.3	NIAGARAN	7,115	2	0	0	2	160	220,108	764,885	215,046	682,454	4,781
OF BLUE LAKE 19-28N-5W POOL A	NIAGARAN REEF	1976	KALKASKA	6,960	14	D	45.4	NIAGARAN	7,265	1	0	0	1	80	10,983	77,388	30,150	264,782	967
OF BLUE LAKE 19-28N-5W POOL B	NIAGARAN REEF	1979	KALKASKA	6,970	120	L	43.4	NIAGARAN	7,280	1	1	0	1	80	11,998	11,998	22,719		

POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL				OF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				G5 GAS STORAGE RESERVOIR			
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP PRODUCING SECTIONS	PAY ZONE DEPTH IN FEET THICKNESS AND LITHOLOGY OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS			DRILLED ACRES	OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS BRINE PER DAY	
							TO END	IN 1979	ABANDONED IN 1979		PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979			
COLD SPRINGS 22-24N-6W	NIAGARAN REEF	1974	KALKASKA	6,715 25 D 44.4	NIAGARAN	6,858	2	0	0	2	120	82,156	481,705	281,221	1,415,230	4,014	4
COLD SPRINGS TWP., 28N-6W, SECTION 30																	
COLD SPRINGS 22-24N-6W	NIAGARAN REEF	1977	KALKASKA	6,872 10 D 45.4	NIAGARAN	7,025	2	0	0	2	160	120,831	226,733	227,749	389,702	1,430	100
COLD SPRINGS TWP., 28N-6W, SECTION 32																	
COLD SPRINGS 22-24N-6W	NIAGARAN REEF	1973	KALKASKA	7,160 6 L 64.4	NIAGARAN	7,350	1	1	0	1	80	417	417				5
COLD SPRINGS TWP., 28N-6W, SECTION 35																	
COLD SPRINGS 22-24N-6W	NIAGARAN REEF	1978	KALKASKA	6,988 162 D 75.4	NIAGARAN	7,425	1	0	0	1	80	246	522	379,343	379,343		7
COLD SPRINGS TWP., 28N-6W, SECTION 36																	
EXCELSIOR 3-27N-6W	NIAGARAN REEF	1973	KALKASKA	7,211 10 D 64.0	NIAGARAN	7,402	2	0	0	2	320	15,761	67,549	1,521,145	3,239,842	211	
EXCELSIOR 3-27N-6W POOL A	NIAGARAN REEF	1973	KALKASKA	6,952 139 D 71.5	NIAGARAN	7,346	1	0	0	1	160		1		348	1	
EXCELSIOR TWP., 27N-6W, SECTION 3																	
EXCELSIOR 6-27N-6W	NIAGARAN REEF	1973	KALKASKA	6,740 105 D 66.0	NIAGARAN	7,135	2	0	0	2	240	2,006	248,173	534,624	11,830,422	1,034	1
EXCELSIOR TWP., 27N-6W, SECTION 6; COLD SPRINGS TWP., 28N-6W, SECTION 31 CURRENTLY BEING CONVERTED TO GAS STORAGE RESERVOIR																	
EXCELSIOR 7-27N-6W	NIAGARAN REEF	1973	KALKASKA	6,987 27 D 63.8	NIAGARAN	7,232	1	0	0	1	80		8,941	26,688	509,974	112	
EXCELSIOR TWP., 27N-6W, SECTION 18 DIRECTIONAL HOLE IN WHICH THE SURFACE LOCATION IS 18-27N-6W AND THE SUBSURFACE LOCATION IS 7-27N-6W																	
EXCELSIOR 9-27N-6W	NIAGARAN REEF	1972	KALKASKA	7,034 47 D	NIAGARAN	7,526	4	1	0	4	480	3,460	35,222	342,547	1,515,706	74	
EXCELSIOR TWP., 27N-6W, SECTIONS 8, 9																	
EXCELSIOR 12-27N-6W	NIAGARAN REEF	1973	KALKASKA	7,165 53 D 61.5	NIAGARAN	7,365	1	0	0	1	160	1,803	17,789	47,352	310,471	111	
EXCELSIOR TWP., 27N-6W, SECTION 17																	
EXCELSIOR 19-27N-6W	NIAGARAN REEF	1975	KALKASKA	7,091 37 D 64.6	NIAGARAN	7,288	2	0	0	2	160	2,184	14,651	186,077	892,881	92	
EXCELSIOR TWP., 27N-6W, SECTION 19																	
KALKASKA 1-27N-7W	NIAGARAN REEF	1974	KALKASKA	6,693 20 D 65.0	NIAGARAN	6,784	1	0	0	1	160	491	25,642	147,950	2,553,264	160	
KALKASKA TWP., 27N-7W, SECTION 1 CURRENTLY BEING CONVERTED TO GAS STORAGE RESERVOIR																	
KALKASKA 3-27N-7W	SALINA-NIAGARAN REEF	1973	KALKASKA	6,396 180 D 42.7	NIAGARAN	6,850	1	0	0	1	160	5,986	97,230	78,321	819,979	608	60
KALKASKA 3-27N-7W POOL A	SALINA-NIAGARAN REEF	1973	KALKASKA	6,538 206 D 45.2	NIAGARAN	6,888	1	0	0	1	80	16,736	152,182	39,122	375,596	1,902	6
KALKASKA 7-27N-7W POOL B	NIAGARAN REEF	1977	KALKASKA	6,647 6 D 45.6	NIAGARAN	6,827	1	0	0	1	80	3,328	16,822	49,486	213,859	210	15
KALKASKA TWP., 27N-7W, SECTION 3																	
KALKASKA 5-27N-7W	NIAGARAN REEF	1970	KALKASKA	6,314 68 D 41.5	CLINTON	6,921	5	0	0	5	400	86,611	994,631	262,808	1,367,156	2,487	545
KALKASKA TWP., 27N-7W, SECTIONS 5, 6 RAPID RIVER TWP., 28N-7W, SECTION 32																	
KALKASKA 7-27N-7W	NIAGARAN REEF	1972	KALKASKA	6,305 3 D	NIAGARAN	6,662	1	0	0	1	80	8,899	119,236	10,927	97,693	1,490	73
KALKASKA TWP., 27N-7W, SECTION 7																	
KALKASKA 9-27N-7W	NIAGARAN REEF	1972	KALKASKA	6,482 89 D 55.0	NIAGARAN	6,830	1	0	0	1	160	1,185	39,542	280,431	1,236,510	247	38
KALKASKA TWP., 27N-7W, SECTION 9																	
KALKASKA 10-27N-7W	NIAGARAN REEF	1972	KALKASKA	6,470 188 D 64.0	NIAGARAN	6,859	1	0	0	1	320	7,930	134,872	310,895	4,242,277	421	2
KALKASKA TWP., 27N-7W, SECTION 10																	
KALKASKA 11-27N-7W	NIAGARAN REEF	1978	KALKASKA	6,876 15 D 42.9	NIAGARAN	6,950	1	0	0	1	160	28,444	40,978	184,944	237,522	256	
KALKASKA TWP., 27N-7W, SECTION 11																	
KALKASKA 12-27N-7W	NIAGARAN REEF	1972	KALKASKA	6,883 19 D	NIAGARAN	7,009	1	0	0	1	80	7,824	30,548	14,490	25,494	382	10
KALKASKA TWP., 27N-7W, SECTION 12																	
KALKASKA 13-27N-7W	NIAGARAN REEF	1972	KALKASKA	6,889 60 D 63.0	NIAGARAN	7,225	1	0	0	1	240	5,402	94,045	678,629	4,682,762	392	
KALKASKA TWP., 27N-7W, SECTION 13																	
KALKASKA 16-27N-7W	NIAGARAN REEF	1973	KALKASKA	6,572 158 D 47.4	NIAGARAN	7,077	1	ABANDONED	1979	40		4	7,731		37,693	193	
KALKASKA 16-27N-7W POOL A	NIAGARAN REEF	1973	KALKASKA	7,014 98 D 45.2	NIAGARAN	7,405	2	0	0	2	160	13,710	101,073	277,199	884,281	631	90
KALKASKA 16-27N-7W POOL B	NIAGARAN REEF	1979	KALKASKA	6,778 10 D 44.5	NIAGARAN	6,949	1	1	0	1	80	8,090	8,090	7,185	7,185	101	
KALKASKA TWP., 27N-7W, SECTIONS 15, 16																	
KALKASKA 19-27N-7W	NIAGARAN REEF	1974	KALKASKA	6,626 10 D 44.0	NIAGARAN	7,003	2	0	0	2	320	12,030	44,200		6,573	138	408
KALKASKA TWP., 27N-7W, SECTION 19																	
KALKASKA 23-27N-7W	NIAGARAN REEF	1977	KALKASKA	7,027 34 D 64.3	NIAGARAN	7,166	1	0	0	1	160	84	5,661	1,700	126,304	35	
KALKASKA TWP., 27N-7W, SECTION 23																	
KALKASKA 24-27N-7W	SALINA-NIAGARAN REEF	1974	KALKASKA	6,726 469 D 46.8	NIAGARAN	7,317	1	0	0	1	80	4,081	4,815	15,512	16,668	60	
KALKASKA 24-27N-7W POOL A	NIAGARAN REEF	1978	KALKASKA	7,101 18 D 61.8	NIAGARAN	7,242	1	0	0	1	80	8,985	9,567	635,428	690,836	120	
KALKASKA TWP., 27N-7W, SECTION 24																	
KALKASKA 28-27N-7W	NIAGARAN REEF	1970	KALKASKA	7,129 28 D CONB. 65.3	CLINTON	7,408	1	ABANDONED	1979	160		20,327		907,892	127		
KALKASKA 28-27N-7W POOL A	NIAGARAN REEF	1972		6,977 192 D 68.0			1	0	0	1	160	1,307	56,659	270,304	1,469,427	354	1
KALKASKA 28-27N-7W POOL B	NIAGARAN REEF	1975		7,088 40 D	NIAGARAN	7,205	1	0	0	1	80		24,763		308,312	309	
KALKASKA TWP., 27N-7W, SECTION 28																	
KALKASKA 32-27N-7W	NIAGARAN REEF	1971	KALKASKA	6,828 309 D 60	NIAGARAN	7,369	1	0	0	1	160	856	57,603	72,279	1,831,138	360	1
KALKASKA 32-27N-7W POOL A	NIAGARAN REEF	1975	KALKASKA	7,076 22 D	NIAGARAN	7,255	1	0	0	1	80		25,423	27,785	1,222,015	318	
KALKASKA TWP., 27N-7W, SECTION 32																	
KALKASKA 10-27N-8W	NIAGARAN REEF	1978	KALKASKA	6,485 33 D 42	NIAGARAN	6,666	3	2	0	3	240	171,242	229,080	299,184	382,080	955	60
KALKASKA TWP., 27N-8W, SECTION 10																	
KALKASKA 11-27N-8W	NIAGARAN REEF	1973	KALKASKA	6,449 17 D 44.2	NIAGARAN	6,776	2	0	0	1	80	73,904	164,776	74,436	127,350	2,060	63
KALKASKA TWP., 27N-8W, SECTIONS 2, 11																	
KALKASKA 12-27N-8W	NIAGARAN REEF	1979	KALKASKA	6,354 210 D 40.8	NIAGARAN	6,773	1	1	0	1	80						
KALKASKA TWP., 27N-8W, SECTION 12																	
KALKASKA 13-27N-8W	NIAGARAN REEF	1972	KALKASKA	6,950 10 D 47.8	NIAGARAN	7,365	2	0	0	2	240	38,475	374,523	237,318	1,592,578	1,561	
KALKASKA TWP., 27N-8W, SECTION 13																	
KALKASKA 14-27N-8W	NIAGARAN REEF	1974	KALKASKA	6,551 43 D	NIAGARAN	6,790	1	0	0	1	160	767	58,160	203,432	2,566,167	364	
KALKASKA TWP., 27N-8W, SECTION 14																	
KALKASKA 20-27N-8W	NIAGARAN REEF	1975	KALKASKA	6,493 5 D	NIAGARAN	6,750	2	0	0	2	160	118,325	332,601	98,078	242,310	2,079	111
KALKASKA TWP., 27N-8W, SECTION 20																	

POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL				OF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				G5 GAS STORAGE RESERVOIR			
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP PRODUCING SECTIONS	PAY ZONE DEPTH IN FEET THICKNESS AND LITHOLOGY OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS			DRILLED ACRES	OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS BRINE PER DAY	
							TO END	IN 1979	ABANDONED IN 1979		PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979			
KALKASKA 21-27N-8W	NIAGARAN REEF	1971	KALKASKA	6,562 77 D 45.1	NIAGARAN	6,856	8	0	0	5	400	PRODUCTION COMBINED WITH A-1 CARBONATE PRODUCTION					
KALKASKA 21-27N-8W	A-1 CARBONATE	1972		6,591 31 D							80	391,144	4,045,788	399,693	6,067,830	8,424	
KALKASKA TWP., 27N-8W, SECTIONS 21, 22, 28																	
KALKASKA 24-27N-8W	SALINA-NIAGARAN REEF	1973	KALKASKA	6,380 220 D 46.1	NIAGARAN	6,852	1	0	0	1	160	106,996	586,960	91,400	951,193	3,669	
KALKASKA TWP., 27N-8W, SECTION 24																	
KALKASKA 25-27N-8W	NIAGARAN REEF	1972	KALKASKA	6,491 114 D	NIAGARAN	7,000	2	0	0	2	320	7,221	177,394	76,406	5,151,506	554	1
KALKASKA 25-27N-8W POOL A	NIAGARAN REEF	1974	KALKASKA	6,798 40 D 59	NIAGARAN	6,980	1	0	0	1	160		2,721	62,579	190,066	1,389,561	516
KALKASKA TWP., 27N-8W, SECTION 25																	
KALKASKA 26-27N-8W	SALINA-NIAGARAN REEF	1973	KALKASKA	6,372 397 D 55.0	NIAGARAN	6,968	1	0	0	1	160	23,498	203,205	315,085	2,036,607	1,270	13
KALKASKA TWP., 27N-8W, SECTION 26																	
KALKASKA 28-27N-8W	NIAGARAN REEF	1971	KALKASKA	6,717 6 D	NIAGARAN	6,838	1	0	0	1	160	1,628	36,997			231	320
KALKASKA TWP., 27N-8W, SECTION 28																	
KALKASKA 30-27N-8W	NIAGARAN REEF	1974	KALKASKA	6,496 22 D 64.7	NIAGARAN	6,692	1	0	0	1	480	22,087	218,371	1,331,080	7,180,736	455	
KALKASKA TWP., 27N-8W, SECTION 30 DIRECTIONAL HOLE IN WHICH THE SURFACE LOCATION IS IN GRAND TRAVERSE COUNTY, WHITENATER TOWNSHIP SECTION 36-27N-9W; AND THE SUBSURFACE LOCATION IS IN KALKASKA COUNTY, KALKASKA TOWNSHIP SECTION 30-27N-8W																	
KALKASKA 32-27N-8W	NIAGARAN REEF	1975	KALKASKA	6,585 7 D 45.0	NIAGARAN	6,890	2	0	0	1	160	9,363	112,376	26,450	160,148	702	
KALKASKA TWP., 27N-8W, SECTION 30																	
KALKASKA 33-27N-8W	NIAGARAN REEF	1972	KALKASKA	6,620 15 D	NIAGARAN	6,754	1	0	0	1	160	1,197	27,149	37,352	1,368,991	170	
KALKASKA TWP., 27N-8W, SECTION 33																	
RAPID RIVER 5-28N-7W	NIAGARAN REEF	1976	KALKASKA	5,915 10 D	NIAGARAN	6,197	3	0	0	3	480	15,640	16,956	333,775	333,775	35	

POOL CLASSIFICATION				OF ACTIVE OIL FIELD OR POOL				GF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				GS GAS STORAGE RESERVOIR			
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP	PAY ZONE	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS				OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PERCENTAGE (DRILLED)	TOTAL BARRELS BRINE PER DAY			
							TO END	COMP. IN	ABAND. IN	ACTIVE AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979					
BEAR LAKE 27-23N-15W	NIAGARAN REEF	1975	MANISTEE	4,673 64 D 44.2	NIAGARAN	4,870	2	0	0	2	160	66,536	305,185	333,065	1,164,253	1,907			
BEAR LAKE 27-23N-15W POOL A	NIAGARAN REEF	1976	MANISTEE	4,592 5 D 44	NIAGARAN	4,801	1	0	0	1	80	71,836	349,211	103,721	369,671	4,365			
BEAR LAKE TWP., 23N-15W, SECTION 27																			
BEAR LAKE 31-23N-15W	NIAGARAN REEF	1974	MANISTEE	4,166 59 D 40.0	NIAGARAN	4,580	1	0	0	1	80	16,822	231,834	14,688	151,083	2,898			
BEAR LAKE TWP., 23N-15W, SECTION 31																			
BEAR LAKE 32-23N-15W	NIAGARAN REEF	1974	MANISTEE	4,592 62 D 45.3	NIAGARAN	4,860	3	0	0	3	240	272,743	1,059,580	260,185	955,867	4,415			
BEAR LAKE TWP., 23N-15W, SECTION 32																			
BEAR LAKE 33-23N-15W	NIAGARAN REEF	1974	MANISTEE	4,621 21 D 42.6	NIAGARAN	4,806	5	0	0	5	520	508,692	2,108,035	641,970	2,203,172	4,054			
BEAR LAKE TWP., 23N-15W, SECTIONS 28, 33																			
BEAR LAKE 34-23N-15W	NIAGARAN REEF	1975	MANISTEE	4,783 18 D 44.6	NIAGARAN	4,957	3	0	0	3	240	210,199	920,254	492,578	1,463,483	3,834			
BEAR LAKE TWP., 23N-15W, SECTION 34																			
BEAR LAKE 35-23N-15W	NIAGARAN REEF	1977	MANISTEE	4,839 10 D	NIAGARAN	4,985	1	0	0	1	160	3,186	3,186	212,333	212,333	20			
BEAR LAKE TWP., 23N-15W, SECTION 35																			
BROWN 4-22N-15W	NIAGARAN REEF	1974	MANISTEE	4,397 331 D 69.5	NIAGARAN	4,907	2	0	0	2	320	77,972	242,551	4,324,104	10,257,526	758			
BROWN 4-22N-15W POOL A	NIAGARAN REEF	1975	MANISTEE	4,419 306 D 64.2	NIAGARAN	4,926	1	0	0	1	120	25,286	53,115	805,346	1,680,131	443			
BROWN TWP., 22N-15W, SECTIONS 3, 4																			
*TWO 160-ACRE UNITS ESTABLISHED BY ORDER 12-5-76, EFFECTIVE JUNE 8, 1976																			
BROWN 5-22N-15W	NIAGARAN REEF	1976	MANISTEE	4,649 12 D 45.3	NIAGARAN	4,762	2	0	0	2	160	59,910	236,530	205,308	542,982	1,478			
BROWN TWP., 22N-15W, SECTION 5																			
BROWN 6-22N-15W	SALINA-NIAGARAN REEF	1974	MANISTEE	4,207 415 D 57.3	NIAGARAN	4,809	1	0	0	1	120	16,152	42,706	1,425,286	3,020,587	356			
BROWN TWP., 22N-15W, SECTION 6																			
BROWN 7-22N-15W	NIAGARAN REEF	1974	MANISTEE	4,378 292 D 65.0	NIAGARAN	4,780	1	0	0	1	160	86	17,328	239,750	2,182,322	108			
BROWN TWP., 22N-15W, SECTION 7																			
BROWN 8-22N-15W	NIAGARAN REEF	1974	MANISTEE	4,692 27 D 66.0	NIAGARAN	4,888	1	0	0	1	80	4,632	16,651	385,657	1,536,394	233			
BROWN TWP., 22N-15W, SECTION 8																			
BROWN 19-22N-15W	SALINA-NIAGARAN REEF	1977	MANISTEE	4,456 8 D	NIAGARAN	4,575	1	0	0	1	80								
BROWN TWP., 22N-15W, SECTION 19																			
CLEON 11-24N-13W	NIAGARAN REEF	1973	MANISTEE	5,624 121 D 43.5	NIAGARAN	6,167	4	0	0	4	320	162,712	401,412	140,819	372,994	1,254			
CLEON TWP., 24N-13W, SECTIONS 11, 12																			
CLEON 12-24N-13W	NIAGARAN REEF	1974	MANISTEE	5,851 35 D 39.3	NIAGARAN	6,119	1	0	0	1	80	77,470	235,136	75,478	156,290	2,939			
CLEON 12-24N-13W POOL A	NIAGARAN REEF	1975	MANISTEE	5,702 238 D 41.1	NIAGARAN	6,043	1	0	0	1	80	110,657	399,579	49,023	180,568	4,994			
CLEON TWP., 24N-13W, SECTION 12																			
CLEON 14-24N-13W	NIAGARAN REEF	1973	MANISTEE	5,655 69 D 44.3	NIAGARAN	5,928	2	0	0	2	160	88,561	277,908	224,619	496,455	1,737			
CLEON 14-24N-13W POOL A	NIAGARAN REEF	1976	MANISTEE	5,728 59 D	NIAGARAN	5,897	3	0	0	3	320	218,221	426,181	320,744	470,867	1,332			
CLEON TWP., 24N-13W, SECTION 14																			
*DISCOVERY WELL ACTUALLY COMPLETED AS DEVELOPMENT WELL IN 1973. RECLASSIFIED AS A DISCOVERY IN 1974																			
CLEON 15-24N-13W	NIAGARAN REEF	1974	MANISTEE	5,464 20 D	NIAGARAN	5,770	1	0	0	1	80	2,543	35,347	845,926	2,834,111	442			
CLEON TWP., 24N-13W, SECTION 15																			
CLEON 17-24N-13W	NIAGARAN REEF	1978	MANISTEE	5,408 54 D 59	NIAGARAN	5,523	2	1	0	2	160	21,040	21,040	751,784	751,784	132			
CLEON TWP., 24N-13W, SECTION 17																			
CLEON 19-24N-13W	NIAGARAN REEF	1976	MANISTEE	5,073 129 D 42.25	NIAGARAN	5,453	1	0	0	1	80	24,270	53,526	121,781	591,568	669			
CLEON 19-24N-13W POOL A	NIAGARAN REEF	1977	MANISTEE	5,007 133 D 38.9	NIAGARAN	5,450	1	0	0	1	80	760	1,277			16			
CLEON TWP., 24N-13W, SECTION 19																			
CLEON 20-24N-13W	NIAGARAN REEF	1974	MANISTEE	5,145 202 D	NIAGARAN	5,534	3	2	0	3	240	3,918	5,165	158,442	228,778	22			
CLEON TWP., 24N-13W, SECTION 20																			
CLEON 22-24N-13W	NIAGARAN REEF	1975	MANISTEE	5,436 73.5 D 65.5	NIAGARAN	5,701	3	0	0	3	200	498	117,536	458,934	7,750,489	588			
CLEON TWP., 24N-13W, SECTION 22																			
CLEON 24-24N-13W	NIAGARAN REEF	1977	MANISTEE	5,857 76 D	NIAGARAN	6,052	1	0	0	1	80	3,052	3,488	76,429	80,305	44			
CLEON TWP., 24N-13W, SECTION 24																			
CLEON 26-24N-13W	NIAGARAN REEF	1976	MANISTEE	5,616 154 D 74.8	NIAGARAN	5,901	1	0	0	1	160	4,297	12,204	220,569	453,689	76			
CLEON 26-24N-13W POOL A	NIAGARAN REEF	1979	MANISTEE	5,762 20 L	NIAGARAN	5,904	2	2	0	2	160								
CLEON TWP., 24N-13W, SECTION 26																			
CLEON 27-24N-13W	NIAGARAN REEF	1976	MANISTEE	5,659 36 D	NIAGARAN	5,937	3	0	0	2	160		56	881	1				
CLEON 27-24N-13W POOL A	NIAGARAN REEF	1977	MANISTEE	5,724 10 D	NIAGARAN	5,860	2	0	0	2	320	6,668	15,806	851,008	1,148,459	49			
CLEON TWP., 24N-13W, SECTION 27																			
*ABANDONED IN 1976, REACTIVATED IN 1978																			
CLEON 29-24N-13W	NIAGARAN REEF	1978	MANISTEE	5,664 10 D	NIAGARAN	5,770	2	1	0	2	160	4,317	5,111	128,785	128,785	32			
CLEON 29-24N-13W POOL A	NIAGARAN REEF	1979	MANISTEE	5,520 13 D 65.4	NIAGARAN	5,698	1	1	0	1	80	25	25			1			
CLEON TWP., 24N-13W, SECTION 29																			
CLEON 31-24N-13W	NIAGARAN REEF	1977	MANISTEE	5,220 119 D	NIAGARAN	5,543	2	1	0	2	160	12,372	26,891	296,731	583,974	168			
CLEON TWP., 24N-13W, SECTION 31																			
CLEON 32-24N-13W	NIAGARAN REEF	1977	MANISTEE	5,418 44 D 51.5	NIAGARAN	5,683	1	0	0	1	160	16,122	16,177	157,934	157,934	101			
CLEON 32-24N-13W POOL A	NIAGARAN REEF	1978	MANISTEE	5,363 90 D 46.6	NIAGARAN	5,773	2	1	0	2	160	32,561	33,098	101,419	101,419	207			
CLEON TWP., 24N-13W, SECTION 32																			
FILER 2-21N-17W	NIAGARAN REEF	1979	MANISTEE	3,731 44 ?	NIAGARAN	4,225	3	3	0	3	320								
FILER TWP., 21N-17W, SECTION 2																			
MANISTEE	SALINA	1959	MANISTEE	3,616 94 D	NIAGARAN	4,165	1	ABANDONED	1961	160									
FILER TWP., 21N-17W, SECTION 24																			
MANISTEE 4-21N-16W	NIAGARAN REEF	1979	MANISTEE	4,377 11 L	NIAGARAN	5,813	1	1	0	1	80								
MANISTEE TWP., 22N-16W, SECTION 33																			
MANISTEE 1-22N-16W	NIAGARAN REEF	1973	MANISTEE	4,283 54 D 58.6	NIAGARAN	4,807	2	0	0	2	320	86,919	484,887	115,071	1,515				
MANISTEE 1-22N-16W POOL A	NIAGARAN REEF	1975	MANISTEE	4,408 81 D 47.5	NIAGARAN	4,630	3	0	0	3	240	31,796	140,120	427,220	1,252,330	584			
MANISTEE TWP., 22N-16W, SECTION 1; BROWN TWP., 22N-15W, SECTION 6																			

POOL CLASSIFICATION				OF ACTIVE OIL FIELD OR POOL				GF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				GS GAS STORAGE RESERVOIR			
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP	PAY ZONE	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS				OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PERCENTAGE (DRILLED)	TOTAL BARRELS BRINE PER DAY			
							TO END	COMP. IN	ABAND. IN	ACTIVE AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979					
MANISTEE 2-22N-16W	NIAGARAN REEF	1975	MANISTEE	4,245 15 D	NIAGARAN	4,558	1	0	0	1	80	27,745	194,313	32,014	95,843	2,436			
MANISTEE 2-22N-16W POOL A	NIAGARAN REEF	1978	MANISTEE	4,162 36 D 37.8	NIAGARAN	4,460	1	0	0	1	80	12,445	27,761			347			
MANISTEE TWP., 22N-16W, SECTION 2																			
MANISTEE 3-22N-16W	NIAGARAN REEF	1976	MANISTEE	4,135 46 D	SALINA-NIAGARAN	4,365	2	0	0	1	160		4,794		959	30			
MANISTEE TWP., 22N-16W, SECTION 3																			
MANISTEE 12-22N-16W	NIAGARAN REEF	1974	MANISTEE	4,701 17 D 45.0	NIAGARAN	4,844	2	0	0	2	160	175,906	469,165	271,481	467,649	2,932			
MANISTEE TWP., 22N-16W, SECTION 12																			
MANISTEE 13-22N-16W	SALINA-NIAGARAN REEF	1976	MANISTEE	4,511 201 D	SALINA-NIAGARAN	4,832	1	0	0	1	160	559	559	251,009	251,009	3			
MANISTEE 13-22N-16W POOL A	NIAGARAN REEF	1976	MANISTEE	4,604 62 D	NIAGARAN	4,837	1	0	0	1	80	1,074	1,074	351,973	351,973	13			
MANISTEE TWP., 22N-16W, SECTION 13																			
MANISTEE 14-22N-16W	NIAGARAN REEF	1977	MANISTEE	4,342 258 D 42.6	NIAGARAN	4,681	1	0	0	1	80	3,043	3,540	16,901	16,901	44			
MANISTEE TWP., 22N-16W, SECTION 14																			
MANISTEE 15-22N-16W	NIAGARAN REEF	1974	MANISTEE	4,467 15 D 42.8	NIAGARAN	4,725	3	0	0	3	240	68,836	326,171	313,625	1,257,208	1,359			
MANISTEE TWP., 22N-16W, SECTIONS 10, 15																			
MANISTEE 16-22N-16W	NIAGARAN REEF	1975	MANISTEE	4,049 34 D 43.2	NIAGARAN	4,228	2	0	0	2	160	52,748	347,000	31,342	193,059	2,169			
MANISTEE TWP., 22N-16W, SECTION 16																			
MANISTEE 17-22N-16W	NIAGARAN REEF	1976	MANISTEE	3,930 10 D	NIAGARAN	4,230	3	1	0	3	240	194,557	479,116	165,825	349,817	1,996			
MANISTEE 17-22N-16W POOL A	NIAGARAN REEF	1977	MANISTEE	4,116 69 D 47	NIAGARAN	4,285	1	0	0	1	80	43,442	102,908	20,603	46,373	1,286			
MANISTEE TWP., 22N-16W, SECTION 17																			
MANISTEE 18-22N-16W	NIAGARAN REEF	1977	MANISTEE	3,902 10 D	NIAGARAN	4,130	5	0	0	5	400	186,489	374,038	148,088	319,094	935			
MANISTEE TWP., 22N-16W, SECTION 18																			
MANISTEE 20-22N-16W	NIAGARAN REEF	1975	MANISTEE	3,996 34 D 43.2	NIAGARAN	4,225	2	0	0	2	160	124,941	287,738	235,270	725,124	1,798			
MANISTEE TWP., 22N-16W, SECTION 20																			
MANISTEE 23-22N-16W	NIAGARAN REEF	1974	MAN																

POOL CLASSIFICATION			OF ACTIVE OIL FIELD OR POOL				OF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				GS GAS STORAGE RESERVOIR			
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC	COUNTY	TOWNSHIP	PAY ZONE	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS				DRILLED ACRES	OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE (BBLs)	TOTAL BARRELS DRILLED PER DAY
								TO END	COMP IN	ABAND IN	ACTIVE AT END		1979	CUMULATIVE THROUGH 1979	1979	CUMULATIVE THROUGH 1979		
MAPLE GROVE 23-23N-14W	NIAGARAN REEF	1977	MANISTEE	23N-14W	D	NIAGARAN	5,190	1	0	0	1	80	6,054	10,445	488,202	761,672	131	
MAPLE GROVE TWP., 23N-14W, SECTION 30																		
MAPLE GROVE 23-23N-13W	NIAGARAN REEF	1977	MANISTEE	23N-13W	D	NIAGARAN	5,505	3	2	0	3	240	80,451	125,322	1,676,204	3,079,207	522	
MAPLE GROVE TWP., 23N-13W, SECTION 6																		
ONEKAMA 24-24N-16W	NIAGARAN REEF	1975	MANISTEE	24N-16W	D	NIAGARAN	4,485	1	1	0	1	80	3,326	3,326			42	5
ONEKAMA TWP., 24N-16W, SECTION 24																		
PLEASANTON 25-24N-15W	NIAGARAN REEF	1977	MANISTEE	24N-15W	D	NIAGARAN	4,490	1	0	0	1	80	23,397	65,919	3,902	16,879	824	185
PLEASANTON TWP., 24N-15W, SECTION 25																		
PLEASANTON 26-24N-15W	NIAGARAN REEF	1974	MANISTEE	24N-15W	D	NIAGARAN	4,474	16	0	0	4	240	155,661	801,476	129,122	433,403	3,339	139
PLEASANTON TWP., 24N-15W, SECTION 36																		
SPRINGDALE 26-24N-14W	NIAGARAN REEF	1976	MANISTEE	24N-14W	D	NIAGARAN	4,915	1	0	0	1	80	101,503	175,505	58,072	99,567	2,194	
SPRINGDALE TWP., 24N-14W, SECTION 20																		
SPRINGDALE 21-24N-14W	NIAGARAN REEF	1975	MANISTEE	24N-14W	D	NIAGARAN	5,085	4	0	1	3	320	277,576	885,129	244,659	517,465	2,766	12
SPRINGDALE TWP., 24N-14W, SECTION 21																		
SPRINGDALE 25-24N-14W	NIAGARAN REEF	1972	MANISTEE	24N-14W	D	NIAGARAN	5,448	1	0	0	1	40	94,175	303,317	133,645	532,193	7,583	32
SPRINGDALE TWP., 24N-14W, SECTION 25																		
SPRINGDALE 26-24N-14W	NIAGARAN REEF	1974	MANISTEE	24N-14W	D	NIAGARAN	5,195	3	0	0	3	240	307,594	713,902	332,067	704,180	2,975	
SPRINGDALE TWP., 24N-14W, SECTION 26																		
SPRINGDALE 28-24N-14W	SALINA-NIAGARAN REEF	1973	MANISTEE	24N-14W	D	NIAGARAN	5,180	2	1	0	2	160	114,648	461,192	86,421	239,112	2,882	
SPRINGDALE TWP., 24N-14W, SECTION 28																		
SPRINGDALE 29-24N-14W	NIAGARAN REEF	1976	MANISTEE	24N-14W	D	NIAGARAN	4,959	1	0	0	1	80	11,706	34,957		4,280	437	200
SPRINGDALE TWP., 24N-14W, SECTION 29																		
SPRINGDALE 32-24N-14W	NIAGARAN REEF	1974	MANISTEE	24N-14W	D	NIAGARAN	5,050	3	0	0	3	240	38,119	88,454	7,429	12,950	369	786
SPRINGDALE TWP., 24N-14W, SECTION 32; MAPLE GROVE TWP., 23N-14W, SECTION 5																		
SPRINGDALE 34-24N-14W	SALINA-NIAGARAN REEF	1974	MANISTEE	24N-14W	D	NIAGARAN	5,315	2	1	0	2	80	9,263	33,410	64,518	519,848	418	32
SPRINGDALE 34-24N-14W POOL A	NIAGARAN REEF	1975	MANISTEE	24N-14W	D	NIAGARAN	5,180	2	0	0	2	160	160,094	568,654	86,981	295,460	3,554	43
SPRINGDALE TWP., 24N-14W, SECTION 34 RECLASSIFIED AS A SEPARATE POOL IN 1976																		
SPRINGDALE 35-24N-14W	NIAGARAN REEF	1978	MANISTEE	24N-14W	D	NIAGARAN	5,026	11	0	0	1	80	29,372	44,043	86,522	153,063	551	
SPRINGDALE TWP., 24N-14W, SECTION 35																		
<b>MASON COUNTY</b>																		
HAMLIN 13-19N-18W	NIAGARAN REEF	1972	MASON	19N-18W	D	NIAGARAN	4,500	3	0	0	3	200	80,338	537,922	110,783	704,973	2,690	76
HAMLIN 13-19N-18W POOL A	NIAGARAN REEF	1973	MASON	19N-18W	D	NIAGARAN	4,460	2	0	0	2	200	342	44,039	359,928	6,872,866	220	11
HAMLIN 13-19N-18W POOL B	NIAGARAN REEF	1975	MASON	19N-18W	D	NIAGARAN	4,464	1	0	0	1	80	24,588	129,184	81,629	252,079	1,615	100
HAMLIN TWP., 19N-18W, SECTIONS 13, 24																		
HAMLIN 25-19N-18W	NIAGARAN REEF	1972	MASON	19N-18W	D	NIAGARAN	4,556	3	0	0	3	320	29,438	150,514	282,217	1,112,076	470	140
HAMLIN TWP., 19N-18W, SECTION 25																		
HAMLIN	SALINA-NIAGARAN REEF	1952	MASON		D	CAMBRIAN	6,622	1	ABANDONED 1962		160						1,513	
HAMLIN	NIAGARAN REEF	1952			D			1	ABANDONED 1958		40		60,532					
HAMLIN TWP., 19N-18W, SECTION 27																		
VICTORY 5-19N-17W	NIAGARAN REEF	1974	MASON	19N-17W	D	NIAGARAN	4,779	1	0	0	1	80	838	2,058	55,283	145,033	26	90
VICTORY TWP., 19N-17W, SECTION 5																		
VICTORY 7-19N-17W	NIAGARAN REEF	1973	MASON	19N-17W	D	NIAGARAN	4,730	3	0	0	3	240	16,285	74,048	307,336	1,210,793	309	133
VICTORY TWP., 19N-17W, SECTION 7																		
VICTORY 18-19N-17W	NIAGARAN REEF	1973	MASON	19N-17W	D	NIAGARAN	4,658	2	0	0	2	160	18,402	130,679	85,781	385,014	817	88
VICTORY 18-19N-17W POOL A	NIAGARAN REEF	1974	MASON	19N-17W	D	NIAGARAN	4,555	2	0	0	2	160	1,392	11,019	53,621	848,242	69	120
VICTORY TWP., 19N-17W, SECTION 18																		
VICTORY 19-19N-17W	NIAGARAN REEF	1972	MASON	19N-17W	D	NIAGARAN	4,537	2	0	0	2	160	23,632	282,172	165,396	1,009,340	1,764	55
VICTORY 19-19N-17W POOL A	NIAGARAN REEF	1974	MASON	19N-17W	D	NIAGARAN	4,516	2	0	0	2	160	704	46,506	533,386	5,241,388	291	
VICTORY TWP., 19N-17W, SECTIONS 18, 19																		
<b>MONTMORENCY COUNTY</b>																		
MONTMORENCY 14-32N-1E	NIAGARAN REEF	1978	MONTMORENCY	32N-1E	D	NIAGARAN	4,785	1	0	0	1	80	1,375	2,584				32
MONTMORENCY TWP., 32N-1E, SECTION 14																		
MONTMORENCY 29-32N-1E	NIAGARAN REEF	1975	MONTMORENCY	32N-1E	D	NIAGARAN	4,939	1	0	0	1	80		47	SHUT-IN			1
MONTMORENCY TWP., 32N-1E, SECTION 29																		
<b>OTSEGO COUNTY</b>																		
BAGLEY 21-30N-3W	NIAGARAN REEF	1975	OTSEGO	30N-3W	D	NIAGARAN	6,219	1	ABANDONED 1979		80	49	18,320	1	3,415	229		
BAGLEY TWP., 30N-3W, SECTION 21																		
BAGLEY 23-30N-3W	NIAGARAN REEF	1973	OTSEGO	30N-3W	D	NIAGARAN	6,194	2	0	0	2	120	21,875	206,704	30,406	214,044	1,723	355
BAGLEY TWP., 30N-3W, SECTIONS 22, 23																		
BAGLEY 25-30N-3W	NIAGARAN REEF	1972	OTSEGO	30N-3W	D	NIAGARAN	6,372	1	0	0	1	62	30,905	452,334	140,279	945,048	7,296	25
BAGLEY 25-30N-3W POOL A	A-1 CARBONATE & NIAGARAN REEF	1972	OTSEGO	30N-3W	D	NIAGARAN	6,451	3	0	0	3	240	81,035	907,409	278,427	1,806,769	3,781	50
BAGLEY TWP., 30N-3W, SECTION 25																		
BAGLEY 31-30N-3W	NIAGARAN REEF	1977	OTSEGO	30N-3W	D	NIAGARAN	6,385	2	0	0	2	320	200,182	235,389	139,000	164,837	736	3
BAGLEY TWP., 30N-3W, SECTION 31																		
BAGLEY 35-30N-3W	NIAGARAN REEF	1974	OTSEGO	30N-3W	D	NIAGARAN	6,365	3	1	0	3	240	253,965	852,226	329,834	787,354	3,555	31
BAGLEY 35-30N-3W POOL A	NIAGARAN REEF	1978	OTSEGO	30N-3W	D	NIAGARAN	6,435	1	0	0	1	80	109,208	193,343	84,980	150,149	2,417	
BAGLEY TWP., 30N-3W, SECTION 35																		
CHARLTON 1-30N-1W	NIAGARAN REEF	1975	OTSEGO	30N-1W	D	NIAGARAN	6,165	2	0	0	2	200	22,076	236,656	2,197,695	8,337,002	1,183	
CHARLTON TWP., 30N-1W, SECTION 1																		
CHARLTON 5-30N-1W	NIAGARAN REEF	1972	OTSEGO	30N-1W	D	NIAGARAN	6,216	1	0	0	1	160	39,757	465,804	155,614	679,623	2,911	
CHARLTON TWP., 30N-1W, SECTION 9																		

POOL CLASSIFICATION			OF ACTIVE OIL FIELD OR POOL				OF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				GS GAS STORAGE RESERVOIR			
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC	COUNTY	TOWNSHIP	PAY ZONE	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS				DRILLED ACRES	OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE (BBLs)	TOTAL BARRELS DRILLED PER DAY
								TO END	COMP IN	ABAND IN	ACTIVE AT END		1979	CUMULATIVE THROUGH 1979	1979	CUMULATIVE THROUGH 1979		
CHARLTON 10-30N-1W	NIAGARAN REEF	1974	OTSEGO	30N-1W	D	NIAGARAN	6,093	96	0	0	1	160	103,839	472,420	87,408	357,887	2,953	
CHARLTON TWP., 30N-1W, SECTION 10																		
CHARLTON 12-30N-1W	NIAGARAN REEF	1973	OTSEGO	30N-1W	D	NIAGARAN	5,936	129	0	0	2	160	38,038	253,245	2,110,348	4,479,665	1,583	
CHARLTON TWP., 30N-1W, SECTIONS 12, 13																		
CHARLTON 24-30N-1W	NIAGARAN REEF	1973	OTSEGO	30N-1W	D	NIAGARAN	6,234	26	0	0	1	80	18,400	142,320	151,740	854,115	1,779	
CHARLTON TWP., 30N-1W, SECTION 24																		
CHARLTON 31-30N-1W	A-2 CARBONATE & NIAGARAN REEF	1972	OTSEGO	30N-1W	D	NIAGARAN	5,676	13	0	0	2	430	62,483	293,192	1,177,027	5,239,521	682	
CHARLTON TWP., 30N-1W, SECTION 31																		
CHARLTON 4-31N-1W	NIAGARAN REEF	1970	OTSEGO	31N-1W	D	CLINTON	4,766	116	0	0	2	460	163,951	2,177,994	399,255	2,577,990	4,537	4
CHARLTON 4-31N-1W POOL A	NIAGARAN REEF	1973	OTSEGO	31N-1W	D	NIAGARAN	4,780	15	0	0	1	320						
*DETERMINED A SEPARATE POOL IN 1974. CHARLTON TWP., 31N-1W, SECTIONS 4, 5. DIRECTIONAL HOLE IN WHICH THE SURFACE LOCATION IS 4-31N-1W AND THE SUBSURFACE LOCATION IS 5-31N-1W																		
CHARLTON 7-31N-1W	NIAGARAN REEF	1974	OTSEGO	31N-1W	D	NIAGARAN	4,897	16	0	0	3	240	154,838	564,171	465,853	1,444,742	2,351	
CHARLTON TWP., 31N-1W, SECTION 7																		
CHARLTON 9-31N-1W	SALINA-NIAGARAN REEF	1972	OTSEGO	31N-1W	D	NIAGARAN	4,843	3	0	0	2	160	221,098	1,406,501	174,583	1,256,143	8,791	
CHARLTON TWP., 31N-1W, SECTION 9																		
CHARLTON 27-31N-1W	NIAGARAN REEF	1972	OTSEGO	31N-1W	D	NIAGARAN	5,202	26	0	0	5	360	174,694	1,608,370	475,497	2,577,477	4,468	
CHARLTON TWP., 31N-1W, SECTIONS 27, 28																		
CHARLTON 28-31N-1W	SALINA-NIAGARAN REEF	1974	OTSEGO	31N-1W	D	NIAGARAN	4,923	45	0	0	1	120	184,736	638,893	171,909	2,182,442	5,324	
CHARLTON TWP., 31N-1W, SECTION 28																		
CHARLTON 30-31N-1W	NIAGARAN REEF	1975	OTSEGO	31N-1W	D	NIAGARAN	5,435	11	0	0	3	240	145,371	785,003	191,645	579,403	4,906	
CHARLTON TWP., 31N-1W, SECTION 30																		
CHARLTON 31-31N-1W	NIAGARAN REEF	1973	OTSEGO	31N-1W	D	NIAGARAN	5,391	54	0	0	3	240	161,854	876,487	260,630	717,165	3,652	150
CHARLTON TWP., 31N-1W, SECTIONS 30, 31																		
CHARL																		

POOL CLASSIFICATION			OF AOF	ACTIVE OIL FIELD OR POOL	GF	ACTIVE GAS FIELD OR POOL	G-C	GAS-CONDENSATE FIELD OR POOL	GS	GAS STORAGE RESERVOIR																					
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC	COUNTY TOWNSHIP	PAY ZONE	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS	DRILLED ACRES	OIL PRODUCTION - BBLs	GAS PRODUCTION - Mcf	RECOVERY PERCENTAGE	TOTAL BARRLS BRINE PER DAY																			
							TO COMP IN ABAND IN ACTIVE AT END		PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PER ACRE DRILLED (BBLs)	PER DAY																	
OF	DOVER 33-31N-2W	NIAGARAN REEF	1974	OTSEGO	5,413	9 D	43.6	NIAGARAN	5,678	3	0	0	3	240	76,575	758,826	162,861	712,308	3,162	292											
													DOVER TWP., 31N-2W, SECTIONS 28, 33																		
OF	DOVER 35-31N-2W	NIAGARAN REEF	1973	OTSEGO	5,475	41 D	42.3	NIAGARAN	5,610	3	0	0	3	240	65,364	458,339	88,457	422,845	1,910	23											
													DOVER TWP., 31N-2W, SECTION 35																		
OF	DOVER 36-31N-2W	NIAGARAN REEF	1973	OTSEGO	5,485	135 D	42.7	NIAGARAN	5,535	3	0	0	3	240	92,925	812,397	134,442	731,418	2,385	1											
													DOVER TWP., 31N-2W, SECTIONS 35, 36																		
OF	HAYES 11-29N-4W	NIAGARAN REEF	1969	OTSEGO	6,180	57 D	47.0	NIAGARAN	6,515	5	0	0	4	800	137,016	982,427	131,750	459,024	1,228	105											
													HAYES TWP., 29N-4W, SECTIONS 2, 11, 12, 14																		
OF	HAYES 15-29N-4W	NIAGARAN REEF	1973	OTSEGO	6,350	39 D	42.6	NIAGARAN	6,615	2	0	0	2	160	241,695	1,586,778	140,545	882,943	9,917												
													HAYES TWP., 29N-4W, SECTION 15																		
OF	HAYES 21-29N-4W	NIAGARAN REEF	1972	OTSEGO	6,581	6 D	44.9	NIAGARAN	6,972	1	0	0	1	160	105,130	675,895	42,397	308,342	4,224												
OF	HAYES 21-29N-4W POOL A	NIAGARAN REEF	1972	OTSEGO	6,513	220 D	42.5	NIAGARAN	6,947	2	0	0	2	400	173,787	1,168,417	307,313	1,135,545	2,921												
													HAYES TWP., 29N-4W, SECTIONS 21, 28 *DECLARED A SEPARATE POOL IN 1980 AS A RESULT OF PUBLIC HEARING																		
OF	HAYES 29-29N-4W	SALINA-NIAGARAN REEF	1973	OTSEGO	6,474	53 D	42.7	NIAGARAN	6,982	3	1	0	3	240	165,122	871,724	196,717	716,929	3,632	325											
													HAYES TWP., 29N-4W, SECTION 29																		
OF	HAYES 32-29N-4W	NIAGARAN REEF	1972	OTSEGO	6,462	5 D	42.7	NIAGARAN	6,873	3	0	0	3	320	106,697	852,668	46,305	431,887	2,665	128											
													HAYES TWP., 29N-4W, SECTIONS 29, 31, 32																		
OF	HAYES 34-29N-4W	NIAGARAN REEF	1974	OTSEGO	6,836	25 D	42.4	NIAGARAN	7,050	2	0	0	2	160	111,088	630,338	66,207	360,349	3,940												
													HAYES TWP., 29N-4W, SECTIONS 27, 34																		
OF	HAYES 36-29N-4W	NIAGARAN REEF	1976	OTSEGO	6,464	65 D	47.5	NIAGARAN	6,875	1	0	0	1	80	108,027	285,270	137,390	386,687	3,566												
													HAYES TWP., 29N-4W, SECTION 36																		
OF	OTSEGO LAKE 2-29N-3W	NIAGARAN REEF	1978	OTSEGO	6,448	126 D	47.3	NIAGARAN	6,665	1	0	0	1	80	107,351	172,222	84,431	144,943	2,153												
													OTSEGO LAKE TWP., 29N-3W, SECTION 2																		
OF	OTSEGO LAKE 3-29N-3W	SALINA-NIAGARAN REEF	1971	OTSEGO	6,272	122 D	44.2	NIAGARAN	6,860	2	0	1	1	120	27,488	694,004	128,511	1,414,820	5,783												
													OTSEGO LAKE TWP., 29N-3W, SECTIONS 3, 10																		
OF	OTSEGO LAKE 11-29N-3W	NIAGARAN REEF	1977	OTSEGO	6,628	10 D	44.1	NIAGARAN	6,725	3	2	0	3	200	159,824	320,349	174,089	371,101	1,602	5											
													OTSEGO LAKE TWP., 29N-3W, SECTION 11																		
OF	OTSEGO LAKE 20-29N-3W	NIAGARAN REEF	1978	OTSEGO	6,412	65 D	47.5	NIAGARAN	6,778	1	0	0	1	80		214		SHUT-IN		3											
													OTSEGO LAKE TWP., 29N-3W, SECTION 20																		
OF	OTSEGO LAKE 24-29N-3W	NIAGARAN REEF	1977	OTSEGO	6,561	36 D	49.8	NIAGARAN	6,803	1	0	0	1	160	44,021	44,128	77,443	77,443	276												
													OTSEGO LAKE TWP., 29N-3W, SECTION 24																		
OF	OTSEGO LAKE 26-29N-3W	NIAGARAN REEF	1975	OTSEGO	6,810	12 D	52.7	NIAGARAN	6,968	1	0	0	1	80		3,716		SHUT-IN		46											
													OTSEGO LAKE TWP., 29N-3W, SECTION 26																		
OF	OTSEGO LAKE 31-29N-3W	NIAGARAN REEF	1977	OTSEGO	6,392	148 D	42.2	NIAGARAN	6,848	1	0	0	1	114		350		SHUT-IN		3											
													OTSEGO LAKE TWP., 29N-3W, SECTION 31																		
OF	OTSEGO LAKE 35-29N-3W	SALINA-NIAGARAN REEF	1977	OTSEGO	6,412	368 D	64.2	NIAGARAN	7,115	3	1	0	3	240	32,074	32,645	184,975	184,975	136												
													OTSEGO LAKE TWP., 29N-3W, SECTION 35																		
													<b>PRESQUE ISLE COUNTY</b>																		
OF	ALLIS 17-33N-2E	NIAGARAN REEF	1979	PRESQUE ISLE	3,640			NIAGARAN	3,885	1	1	0	1	80																	
													ALLIS TWP., 33N-2E, SECTION 17																		
OF	ALLIS 19-33N-2E	NIAGARAN REEF	1978	PRESQUE ISLE	3,765	9 D	44.2	NIAGARAN	4,002	2	1	0	2	80	1,082	1,082				14											
													ALLIS TWP., 33N-2E, SECTION 19																		
OF	ALLIS 29-33N-2E	NIAGARAN REEF	1979	PRESQUE ISLE	3,771			NIAGARAN	3,968	1	1	0	1	80																	
													ALLIS TWP., 33N-2E, SECTION 29																		
GF	BELKNAP 7-34N-5E	NIAGARAN REEF	1979	PRESQUE ISLE	2,784	234 L		CLINTON	3,400	1	1	0	1	160																	
													BELKNAP TWP., 34N-5E, SECTION 7																		
GF	BELKNAP 10-34N-5E	NIAGARAN REEF	1977	PRESQUE ISLE	2,960	20 D		NIAGARAN	3,087	1	0	0	1	80						SHUT-IN											
													BELKNAP TWP., 34N-5E, SECTION 10																		
OF	BELKNAP 21-34N-5E	NIAGARAN REEF	1977	PRESQUE ISLE	2,978	24 D	39.8	NIAGARAN	3,340	1	0	0	1	160		3,544				SHUT-IN	22										
													BELKNAP TWP., 34N-5E, SECTION 21																		
OF	BELKNAP 34-34N-5E	NIAGARAN REEF	1977	PRESQUE ISLE	3,152	10 D	51.9	NIAGARAN	3,410	1	0	0	1	80		418				SHUT-IN	5										
													BELKNAP TWP., 34N-5E, SECTION 34																		
OF	BISHARCK 12-34N-4E	NIAGARAN REEF	1977	PRESQUE ISLE	3,017	23 D	38.9	NIAGARAN	3,237	1	0	0	1	80		121				SHUT-IN	1										
													BISHARCK TWP., 34N-4E, SECTION 12																		
G-C	BISHARCK 26-34N-4E	NIAGARAN REEF	1976	PRESQUE ISLE	3,302	65 D		NIAGARAN	3,589	2	0	0	2	160						SHUT-IN											
													BISHARCK TWP., 34N-4E, SECTION 26																		
G-C	CASE 1-33N-3E	NIAGARAN REEF	1978	PRESQUE ISLE	3,608	23 D	50.9	NIAGARAN	3,846	1	0	0	1	80		35				SHUT-IN											
													CASE TWP., 33N-3E, SECTION 1																		
OF	NORTH ALLIS 29-35N-2E	NIAGARAN REEF	1969	PRESQUE ISLE	2,727	10 D		PRECAMBRIAN	5,940	1	0	0	1	40	274	5,647				141											
													NORTH ALLIS TWP., 35N-2E, SECTION 29																		
GF	PULAWSKI 12-34N-5E	SALINA-NIAGARAN REEF	1976	PRESQUE ISLE	2,369	76 D		NIAGARAN	2,840	2	0	0	2	160						SHUT-IN											
													PULAWSKI TWP., 34N-5E, SECTION 12																		
													<b>WEXFORD COUNTY</b>																		
G-C	WEXFORD 1-24N-12W	NIAGARAN REEF	1977	WEXFORD	6,231	91 D	63.4	NIAGARAN	6,640	1	0	0	1	80	8,025	8,090	179,751	179,751	101												
G-C	WEXFORD 1-23N-12W POOL A	NIAGARAN REEF	1978	WEXFORD	6,167	100 D	63	NIAGARAN	6,612	1	0	0	1	80	4,496	4,541	205,758	205,758	57												
													WEXFORD TWP., 24N-12W, SECTION 1																		
G-C	WEXFORD 2-24N-12W	NIAGARAN REEF	1977	WEXFORD	6,156	49 D		NIAGARAN	6,267	1	0	0	1	80	116	44,431	343,816	905,926	555												
													WEXFORD TWP., 24N-12W, SECTION 2																		
G-C	WEXFORD 3-24N-12W	NIAGARAN REEF	1977	WEXFORD	6,077	76 D	65.2	NIAGARAN	6,324	1	0	0	1	80	928	45,460	455,428	1,658,098	568												
													WEXFORD TWP., 24N-12W, SECTION 3																		
													TOTALS																		
													80,746 25,330,757 121,239,340 135,424,526 617,478,640 17,942																		

POOL CLASSIFICATION			OF AOF	ACTIVE OIL FIELD OR POOL	GF	ACTIVE GAS FIELD OR POOL	G-C	GAS-CONDENSATE FIELD OR POOL	GS	GAS STORAGE RESERVOIR																				
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC	COUNTY TOWNSHIP	PAY ZONE	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS	DRILLED ACRES	OIL PRODUCTION - BBLs	GAS PRODUCTION - Mcf	RECOVERY PERCENTAGE	TOTAL BARRLS BRINE PER DAY																		
							TO COMP IN ABAND IN ACTIVE AT END		PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PER ACRE DRILLED (BBLs)	PER DAY																
G-C	WEXFORD 4-24N-12W	NIAGARAN REEF	1978	WEXFORD	6,095	45 D	64.8	NIAGARAN	6,316	1	0	0	1	160	65,447	71,926	842,636	932,333	450											
													WEXFORD TWP., 24N-12W, SECTION 4																	
OF	WEXFORD 5-24N-12W	NIAGARAN REEF	1974	WEXFORD	5,820	127 D		NIAGARAN	6,119	5	1	0	5	360	147,318	402,983	146,634	325,910	1,119											
OF	WEXFORD 5-24N-12W POOL A	NIAGARAN REEF	1976	WEXFORD	5,785	229 D	48.3	NIAGARAN	6,192	1	0	0	1	80	35,054	97,248	161,812	418,019	1,217											
													WEXFORD TWP., 24N-12W, SECTION 5																	
OF	WEXFORD 6-24N-12W	NIAGARAN REEF	1975	WEXFORD	5,775	153 D	41.1	NIAGARAN	6,061	3	1	0	3	240	255,690	629,441	90,391	254,076	2,623	2										
													WEXFORD TWP., 24N-12W, SECTION 6																	
G-C	WEXFORD 9-24N-12W	NIAGARAN REEF	1973	WEXFORD	6,232	4 D	69.8	NIAGARAN	6,265	1	ABANDONED	1978	80																	
G-C	WEXFORD 9-24N-12W POOL A	NIAGARAN REEF	1973	WEXFORD	6,041	101 D	69.8	NIAGARAN	6,414	1	0	0	1	80	69,891	132,814	288,049	620,358	1,660											
OF	WEXFORD 9-24N-12W POOL B	NIAGARAN REEF	1974	WEXFORD	6,081	71 D	42.4	NIAGARAN	6,324	3	0	0	3	240	90,084	393,534	118,294	379,182	1,640	5										
													WEXFORD TWP., 24N-12W, SECTION 9																	
G-C	WEXFORD 10-24N-12W	NIAGARAN REEF	1972	WEXFORD	6,124	107 D	68.9	NIAGARAN	6,352	1	0	0	1	160	7,770	86,025	177,088	3,117,933	538											
													WEXFORD TWP., 24N-12W, SECTION 10																	
G-C	WEXFORD 18-24N-12W	NIAGARAN REEF	1973	WEXFORD	5,842	96 D		NIAGARAN	6,130	3	0	0	3	360	4,384	63,845	1,060,096	4,794,432	177											

TABLE 3

MICHIGAN OIL AND GAS FIELDS

POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL		GF ACTIVE GAS FIELD OR POOL		G-C GAS-CONDENSATE FIELD OR POOL		GS GAS STORAGE RESERVOIR												
ABANDONED OIL FIELD OR POOL		ABANDONED GAS FIELD OR POOL		ABANDONED GAS-CONDENSATE FIELD OR POOL		ABANDONED GAS-CONDENSATE FIELD OR POOL		ABANDONED GAS-CONDENSATE FIELD OR POOL												
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY	TOWNSHIP	PAY ZONE	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS			DRILLED ACRES	OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PERCENTAGE (BBLs)	TOTAL BARRELS BRINE PER DAY			
								TO COMP. IN	ABAND. IN	ACTIVE (AT END)		PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979					
OF	ADAIR	1961	SALINA-NIAGARAN	ST. CLAIR	2,719 10 D	41.4	NIAGARAN	2,755	13	0	0	9	560	3,640	340,706	1979	466,227	608	70	
CHINA TWP., 4N-11E, SECTION 7 CASCO TWP., 4N-15E, SECTIONS 12, 13 5 OF ORIGINAL 18 WELLS TRANSFERRED TO PUTTYGUT																				
OF	ADAMS	1937	ARENAC-BAY	2,032 15 L	37.0	BOIS BLANC	5,079	24	0	0	7	240	3,980						97	
OF	DUNDEE	1937		2,958 15 L	34.7			31	0	0	17	310	7,163						39	
OF	DETROIT RIVER S2	1956		3,943 5 L	39.6									CUMULATIVE PRODUCTION FROM ALL POOLS COMBINED						
OF	RICHFIELD	1941		4,278 5 L	35.5			31	0	0	6	1,080	4,775	1,594,984				975	2	
ADAMS TWP., 19N-3E, SECTIONS 21, 23 THROUGH 27, 34, 35, 36 DEEP RIVER TWP., THE 6 WELLS INCLUDE 3 RICHFIELD, 1 SOUR ZONE, AND 2 DUAL COMPLETIONS, RICHFIELD & SOUR ZONE																				
AGF	ADAMS, NORTH	1942	BEREA	1,605 1 S		DUNDEE	3,101	1	ABANDONED 1948				40					1,306		
OF	DUNDEE	1940		2,905 15 D	32.0	DETROIT RIVER	4,489	49	0	0	18	470	20,868	9,446,955				20,100	3,968	
ADAMS TWP., 19N-3E, SECTIONS 11, 14, 15, 22, 23, 27 BEREA PRODUCTION - SECTION 4																				
AGF	ADAMS, SEC. 8	1962	HILLSDALE	1,420 4 L		PRAIRIE DU CHIEN	4,169	1	ABANDONED 1965				20					19,297		
ADAMS TWP., 6S-2W, SECTION 8																				
OF	ADAMSVILLE	1976	CASS	675 5 L	28	TRAVERSE	680	4	0	0	4	160	2,608	12,768				80	140	
ONTWA TWP., 8S-15W, SECTION 13																				
OF	ADDISON 12-5N-11E	1979	OAKLAND	4,268 10 D	41.3	NIAGARAN	4,339	3	3	0	3	120	347	347					3	
ADDISON TWP., 5N-11E, SECTION 12																				
GF	ADDISON 14-5N-11E	1976	OAKLAND	4,261 21 D		NIAGARAN	4,470	2	0	0	2	80	347	347					4	
ADDISON TWP., 5N-11E, SECTION 14																				
OF	AKRON	1936	TUSCOLA	2,678 17 L	37.3	NIAGARAN	7,941	50				29	1,100	9,789					45	
OF	DETROIT RIVER S2	1938		3,422 11 D	35.2			34				20	900	32,771	2,148,217				1,074	
OF	RICHFIELD	1954		3,774 6 D	39.9									THE 20 WELLS INCLUDE 2 RICHFIELD, 15 SOUR ZONE AND 3 DUAL COMPLETIONS - 52 & 60						
OF	A-2 CARBONATE	1973		6,860 107 D	46.9			2	1	0	2	160	3,577	8,999				103,517	19	
GF	A-1 CARBONATE	1973		7,452 60 D				2	0	0	2	320			PRODUCTION COMBINED WITH A-2 CARBONATE					
AKRON TWP., 14N-8E, SECTIONS 19, 20, 21, 28, 29, 30 WISNER TWP., 14N-7E, SECTIONS 22, 23, 24, 25, 26 SALINA PRODUCTION - SECTIONS 32, 33, 14N-8E																				
OF	AKRON, EAST	1979	TUSCOLA	3,840 6 L			4,025	1	1	0	1	40	187	187					5	
AKRON TWP., 14N-8E, SECTION 25																				
AOF	ALAMO	1949	KALAMAZOO	1,310 2 L		TRAVERSE	1,420	16	ABANDONED 1962				160	27,545					172	
ALAMO TWP., 15-12W, SECTIONS 19, 29, 30																				
AGF	ALBION	1941	CALHOUN	1,610 7 L		PRAIRIE DU CHIEN	4,623	4	ABANDONED 1948				120					6,238		
ALBION TWP., 35-4W, SECTIONS 14, 15																				
ALBION-PULASKI-SCIPIO TREND: FIELD AND PRODUCTION DATA LISTED BY TOWNSHIP AND COUNTY																				
GF	CAL-LEE	1962	CALHOUN	3,036 8 D		PRAIRIE DU CHIEN	4,975	12	1	0	9	620		434	121,770	2,923,668			1	
LEE TWP., 15-5W, SECTIONS 9, 15, 16, 22 1 WELL TRANSFERRED TO LEE 16, 15-5W GAS STORAGE FIELD																				
AOF	LEE TWP.	1961	CALHOUN	3,060 20 D	24.2	PRAIRIE DU CHIEN	4,926	1	ABANDONED 1972				80	CUMULATIVE PRODUCTION COMBINED WITH TRENTON-BLACK RIVER						
OF	TRENTON-BLK. RIVER	1960		4,600 24+ D				33		1	23	490	19,367	2,630,555	398,138	440,311	4,615		50	
LEE TWP., 15-5W, SECTIONS 17, 22, 23, 25, 26, 36																				
OF	SHERIDAN TWP.	1960	CALHOUN	4,179 10+ D	40.0	PRAIRIE DU CHIEN	4,791	45	0	1	32	810	40,060	4,882,917	71,101	3,556,163	6,028		848	
SHERIDAN TWP., 25-4W, SECTIONS 17, 18, 19, 20, 21, 28, 33																				
OF	ALBION TWP.	1958	CALHOUN	3,952 7 D	44.0	PRAIRIE DU CHIEN	4,623	143	0	2	129	2,780	225,192	24,260,602	1,115,526	47,592,672	8,727	2,662		
ALBION TWP., 35-4W, SECTIONS 3, 4, 10, 11, 14, 15, 22, 23, 26, 27, 35, 36																				
OF	PULASKI-HOMER TWPS	1959	JACKSON-CALHOUN	3,766 66+ D	39.6	PRAIRIE DU CHIEN	4,395	140	0	0	133	2,680	336,269	27,373,266	2,338,675	55,456,676	10,214	5,646		
PULASKI TWP., 4S-3W, SECTIONS 6, 7, 8, 17, 18, 19, 20, 21, 28, 29, 32, 33, 34 HOMER TWP., 4S-4W, SECTIONS 1, 12																				
OF	SCIPIO-FAYETTE-MOSCOW TWPS	1957	HILLSDALE	3,576 50+ D	41.4	PRAIRIE DU CHIEN	4,202	209	1	3	184	3,560	560,995	50,111,192	2,110,101	66,887,749	14,076	4,136		
SCIPIO TWP., 5S-3W, SECTIONS 3, 4, 10 THROUGH 15, 23, 24, 25, 26 FAYETTE TWP., 5S-3W, SECTIONS 35, 36 MOSCOW TWP., 5S-2W, SECTIONS 19, 31, 32																				
OF	ADAMS TWP.	1959	HILLSDALE	3,984 6+ D	42.0	PRAIRIE DU CHIEN	4,162	113	2	1	79	1,860	227,423	8,460,217	639,753	13,778,556	4,549	284		
ADAMS TWP., 6S-2W, SECTIONS 3, 4, 5, 6, 7, 8, 10, 11, 14, 15, 16, 17, 23																				
TREND TOTAL (NOTE: ONLY TRENTON-BLACK RIVER FIGURES INCLUDED IN TREND TOTALS)-----682 18 6 598 12,120 1,409,306 117,718,749 6,795,064 190,635,795 15,729 13,626																				
SEE CENTER SPREAD MAP FOR TOWNSHIPS ASSOCIATED WITH ALBION-SCIPIO TREND																				
AGF	ALGONAC	1947	ST. CLAIR	302 6 SH		CABOT HEAD	2,504	2	ABANDONED 1951				80					7,987		
CLAY TWP., 3N-16E, SECTIONS 20, 29																				
OF	ALLEGAN	1937	ALLEGAN	1,563 2 L	38.0	CINCINNATIAN	2,987	19	0	0	1	190		19,088				FIELD REACTIVATED-1971	100	
ALLEGAN TWP., 2N-13W, SECTIONS 2, 5, 9, 10, 13, 22, 23, 26, 27, 34, 35, 36																				
GF	ALPINE	1963	ST. CLAIR	3,151 25 D		CLINTON	3,470	3	0	0	2	120		118,546	2,003,746					
WALES TWP., 6N-15E, SECTION 32																				
OF	ARBELA	1946	TUSCOLA	2,557 7 L	35.3	DETROIT RIVER	3,375	39	0	0	6	450	5,303	356,626				793	11	
ARBELA TWP., 10N-7E, SECTIONS 28, 33, 34																				
AOF	ASHLAND, SEC. 8	1959	NEWAYGO	2,238 1 L		TRAVERSE	2,239	1	ABANDONED 1962				10	267					27	
ASHLAND TWP., 11N-13W, SECTION 8																				
GF	ASHTON	1946	OSCEOLA	1,215 2 S		DETROIT RIVER	3,779	3	0	0	1	400						209,794		
OF	TRAVERSE	1945		2,950 4 L	42.0			4	0	0	3	80	2,191	CUMULATIVE PRODUCTION INCLUDED WITH DUNDEE					800	
OF	DUNDEE	1945		3,645 5 L	40.0			4	0	0	4	200	4,068	498,468					1,780	
LINCOLN TWP., 18N-10W, SECTIONS 5, 6																				
AGF	ASHTON, EAST	1962	OSCEOLA	1,297 5 S		REED CITY	3,750	1	ABANDONED 1970				160							
LINCOLN TWP., 18N-10W, SECTION 3																				
OF	ATLANTA	1945	MONTMORENCY	2,183 5 D	36.2	DETROIT RIVER	2,550	3	0	0	1	30		7,688					256	
AVERY TWP., 30N-3E, SECTIONS 10, 15																				
OF	AU GRES	1956	ARENAC	3,822 14 L	31.4	RICHFIELD	4,315	DETROIT RIVER S2 COMBINED WITH RICHFIELD											409	
OF	RICHFIELD	1953		4,152 11 L	36.5			4	0	0	3	160	2,633	65,434						
AU GRES TWP., 19N-6E, SECTIONS 2, 3, 10, 11 THE 3 WELLS INCLUDE 2 RICHFIELD AND 1 RICHFIELD AND SOUR ZONE																				

POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL		GF ACTIVE GAS FIELD OR POOL		G-C GAS-CONDENSATE FIELD OR POOL		GS GAS STORAGE RESERVOIR											
ABANDONED OIL FIELD OR POOL		ABANDONED GAS FIELD OR POOL		ABANDONED GAS-CONDENSATE FIELD OR POOL		ABANDONED GAS-CONDENSATE FIELD OR POOL		ABANDONED GAS-CONDENSATE FIELD OR POOL											
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY	TOWNSHIP	PAY ZONE	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS			DRILLED ACRES	OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PERCENTAGE (BBLs)	TOTAL BARRELS BRINE PER DAY		
								TO COMP. IN	ABAND. IN	ACTIVE (AT END)		PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979				
OF	AURELIUS 24-2N-2W	1979	NIAGARAN REEF	INGHAM	3,966 10 D	40	NIAGARAN	4,080	1	1	0	1	80	2,209	2,209				28
GF	AURELIUS 24-2N-2W, POOL A	1979	NIAGARAN REEF	INGHAM	3,978 6+ D		NIAGARAN	4,166	1	1	0	1	80					17,661	17,661
AURELIUS TWP., 2N-2W, SECTION 24																			
GF	AURELIUS 26-2N-2W	1974	NIAGARAN REEF	INGHAM	3,954 100 D		NIAGARAN	4,445	2	0	0	2	160	1,419	6,984	233,990	2,164,527		44
AURELIUS TWP., 2N-2W, SECTION 26																			
OF	AURELIUS 35-2N-2W	1971	NIAGARAN REEF	INGHAM	3,942 60 D	37.3	NIAGARAN	4,445	5	0	0	5	320	96,610	1,691,596	60,990	908,158	5,286	606
AURELIUS TWP., 2N-2W, SECTIONS 26, 35, 36																			
GS	AUSTIN	REFER TO TABLE 4	DEVELOPED GAS STORAGE RESERVOIRS																
GF	AVON 1-3N-11E	1977	NIAGARAN	OAKLAND	3,195 101 D		NIAGARAN	3,460	3	0	0	3	40						
AVON TWP., 3N-11E, SECTION 1																			
AOF	BANGOR	1939	TRAVERSE	VAN BUREN	1,002 2 L	29.5	TRENTON	2,552	65	ABANDONED 1959			610		933,965				1,531
BANGOR TWP., 2S-16W, SECTIONS 4, 5, 9, 10, 14, 15, 16, 21, 28, 29																			
OF	BARD	1949	DUNDEE	GLADWIN	3,933 6 L	42.8	DUNDEE	4,017	17	0	0	2	170	2,007	590,447				3,473
BEAVERTON TWP., 17N-2W, SECTIONS 5, 6 GROUT TWP., 18N-2W, SECTIONS 31, 32																			
AOF	BARTON	1947	TRAVERSE	NEWAYGO	3,097 1 L	30.0	DETROIT RIVER	3,745	3	ABANDONED 1963			50		20,227				405
BARTON TWP., 16N-11W, SECTION 16																			
AOF	BEAVER, SEC. 31	1954	BEREA	BAY	2,413 16 SL		SYLVANIA	4,754	1	ABANDONED 1961			10		1,053				105
BEAVER TWP., 15N-3E, SECTION 31																			
OF	BEAVER CREEK UNIT	1947	RICHFIELD	CRAWFORD-KALKASKA	4,160 20 D	44.7	ST. PETER	10,142	113	1	0	60	4,520	593,033	13,045,393	242,427	19,781,550	2,886	1,830
BEAVER CREEK TWP., 25N-4W, SECTIONS 7, 8, 16 THROUGH 21, 27, 28, 29 GARFIELD TWP., 25N-5W, SECTIONS 12, 13																			
OF	BEAVERTON	1934	DUNDEE	GLADWIN	3,928 12 L	41.3	RICHFIELD	5,225	26	0	0	1	330	1,607	895,229				2,713
BEAVERTON TWP., 17N-2W, SECTIONS 2, 3, 11, 13																			

POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL		GF ACTIVE GAS FIELD OR POOL		G-C GAS-CONDENSATE FIELD OR POOL		GS GAS STORAGE RESERVOIR												
ABANDONED OIL FIELD OR POOL		AGF ABANDONED GAS FIELD OR POOL		AG-C ABANDONED GAS-CONDENSATE FIELD OR POOL																
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP	DEPTH IN FEET	THICKNESS AND LITHOLOGY	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS	DRILLED ACRES	OIL PRODUCTION - BBLs	GAS PRODUCTION - Mcf	RECOVERY PERCENTAGE	TOTAL BARRELS OF OIL							
								TO COMP. IN 1979	ABAND. IN 1979	ACT. AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PER ACRE DRILLED (BBLs)	PER DAY				
2F	BLOOMINGDALE	TRVERSE	1938	VAN BUREN	1,244	4 L	42.0	ST. PETER SS.	3,422	432	1	14	4,570	5,910	10,037,074	2,466	467			
BLOOMINGDALE TWP., 15-14W, SECTIONS 1, 2, 3, 6 THROUGH 16, 24																				
2F	BOYD	SALINA-NIAGARAN	1958	ST. CLAIR	2,457	292 D	37.7	PRECAMBRIAN	4,634	49	0	0	36	1,840	27,613	2,100,241	267,044	15,862,360	1,141	120
COLUMBIA TWP., 15-15W, SECTIONS 1, 2, 10 THROUGH 16, 23, 24																				
PINE GROVE TWP., 15-13W, SECTION 18																				
2F	BREEDSVILLE	TRVERSE	1943	VAN BUREN	1,061	2 L	33.0	DETROIT RIVER	1,445	32	0	0	1	40	285,584			952		
CASCO TWP., 4N-15E, SECTIONS 29, 31, 32, W/ 26, W/ 33																				
18A TWP., 3N-15E, SECTIONS 5, 6																				
2F	BRINTON	DUNDEE	1967	ISABELLA	4,082	3 D		DUNDEE	4,085	1	0	0	1	40	1,614	21,010			525	50
GENEVA TWP., 15-16W, SECTIONS 23, 24, 25, 26																				
COLDWATER TWP., 16N-6W, SECTION 5																				
2F	BROOKFIELD 2-1N-4W	NIAGARAN	1979	EATON	3,740	26 D	37.4	CLINTON	4,123	2	2	0	2	160	382	382				2
BROOKFIELD TWP., 1N-4W, SECTION 2																				
2F	BROOKFIELD	MICHIGAN STRAY	1930	ISABELLA	1,355	5 S		SYLVANIA	4,994	91	0	1	8	8,240			13,330,450			
2F	BROOKFIELD	TRVERSE	1979		3,173	12 L		TRVERSE	3,190	1	1	0	1	40	186	186				5
2F	BROOKFIELD	DUNDEE	1979		3,752	3 D		DUNDEE	3,756	1	1	0	1	20	1,052	1,052				53
BROOKFIELD TWP., 14N-6W, SECTIONS 1, 2, 3, 4, 5, 9 (6 DUNDEE), 10, 11, 13, 14 (6 TRVERSE), 15, 23, 24, 25																				
DEERFIELD TWP., 14N-5W, SECTIONS 7, 17, 18, 19, 20, 29, 30																				
SHERMAN TWP., 15N-6W, SECTIONS 29, 30, 31, 32, 33, 36 (ALL MICHIGAN STRAY)																				
2F	BRUCE	NIAGARAN	1974	MACOMB	3,696			NIAGARAN	4,029	2	0	0	2	320	5,078	9,608	866,126	3,294,461		30
BRUCE TWP., 5N-12E, SECTIONS 30, 31																				
2F	BUCKEYE, NORTH	DUNDEE	1936	GLADWIN	3,615	14 L	39.0	SYLVANIA	5,351	291	3	2	52	3,030	116,447	20,050,294		9,781	6,617	10,752
BUCKEYE TWP., 18N-1W, SECTIONS 1, 2, 3, 4, 9 THROUGH 15																				
HAY TWP., 18N-1E, SECTIONS 15, 16, 21, 22																				
2F	BUCKEYE, SOUTH	BEREA	1979	GLADWIN	2,196	12 SS			2,305	3	0	0	3	160						40
2F	BUCKEYE, SOUTH	TRVERSE	1956	GLADWIN	2,891	3 D	42.0	DETROIT RIVER	4,802	7	0	0	0	0	0	0	0	0	0	0
ABANDONED 1960 - PRODUCTION COMBINED WITH BUCKEYE, SOUTH DUNDEE																				
2F	BUCKEYE, SOUTH	DUNDEE	1936		3,570	11 L	39.0		198	1	0	0	28	2,270	35,852	5,201,188				2,291
2F	BUCKEYE, SOUTH	DETROIT RIVER S2	1964		4,481	14 D	46.0		1	0	0	1	40	4,771	113,479					2,837
BUCKEYE TWP., 18N-1W, SECTIONS 22 THROUGH 27, 35, 36																				
HAY TWP., 18N-1E, SECTION 33																				
BILLINGS TWP., 17N-1E, SECTIONS 4, 9, 10																				
2F	BURDELL	DUNDEE	1959	OSCEOLA	3,678	4 L		REED CITY	3,804	6	0	0	1	120	618	157,516				1,313
2F	BURDELL	REED CITY	1960		3,802	2 D			1	0	0	0	0	0	0	0	0	0	0	0
ABANDONED 1969																				
BURDELL TWP., 20N-10W, SECTION 19																				
2F	BUSHNELL	DUNDEE	1935	MONTCALM	3,105	2 L	33.9	DUNDEE	3,125	1	0	0	0	0	0	0	0	0	0	404
BUSHNELL TWP., 9N-6W, SECTION 1																				
2F	BUTMAN	TRVERSE	1950	GLADWIN	2,789	2 L		SYLVANIA	5,027	1	0	0	0	0	0	0	0	0	0	0
ABANDONED 1953 - PRODUCTION COMBINED WITH BUTMAN RICHFIELD																				
2F	BUTMAN	DUNDEE	1949		3,596	6 L	41.4		1	0	0	0	0	0	0	0	0	0	0	0
ABANDONED 1963 - PRODUCTION COMBINED WITH BUTMAN RICHFIELD																				
2F	BUTMAN	RICHFIELD	1949	GLADWIN	4,921	10 D	41.6		5	0	0	5	240	4,466	343,559					1,432
BUTMAN TWP., 20N-1W, SECTION 12 (TRVERSE) BUTMAN TWP., 20N-1W, SECTIONS 11, 12, 13, 14 (DUNDEE & RICHFIELD)																				
2F	CAL-LEE	REFER TO ALBION-PULASKI-SCIPIO TRENDS		PRIMARILY NIAGARAN OIL AND GAS PRODUCTION - LEE TOWNSHIP																
2F	CANNON CREEK	TRVERSE	1950	MISSAUKEE-KALKASKA	2,695	11 L		RICHFIELD	4,810	21	0	0	0	0	0	0	0	0	0	0
2F	CANNON CREEK	DETROIT RIVER S2	1979	MISSAUKEE	4,283	95 L	46.6	AMHERSTBURG	4,848	2	2	0	2	80	4,959	5,290				66
NORWICH TWP., 24N-6W, SECTIONS 6, 7, 18																				
PIONEER TWP., 24N-7W, SECTIONS 1, 2, 12, 13																				
GARFIELD TWP., 25N-6W, SECTION 31																				
GARFIELD TWP., 25N-7W, SECTIONS 25, 26																				
NORWICH TWP., 24N-6W, SECTION 6 (DETROIT RIVER SOUR ZONE)																				
2F	CAPAC	REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																		
2F	CASCO	TRVERSE	1940	ALLEGAN-VAN BUREN	1,095	1.5 L	38.6	TRVERSE	1,115	9	0	0	0	0	0	0	0	0	0	348
CASCO TWP., 1N-16W, SECTIONS 34, 35																				
GENEVA TWP., 15-16W, SECTION 4																				
2F	CAT CREEK	DUNDEE	1968	OSCEOLA	3,696	4 L		DUNDEE	3,890	8	0	0	7	300	8,233	472,818				1,576
HERSEY TWP., 17N-9W, SECTIONS 4, 9																				
2F	CATO	REED CITY	1944	MONTCALM-MECOSTA	3,542	3 D	44.7	DETROIT RIVER	3,731	22	0	1	10	670	13,038	1,162,117				1,735
CATO TWP., 12N-8W, SECTIONS 3, 4, 6, 8, 9																				
DEERFIELD TWP., 13N-9W, SECTION 36																				
2F	CEDAR	MICHIGAN STRAY	1945	OSCEOLA	1,490	7 S		SYLVANIA	5,165	5	0	0	4	800			1,430,876			
2F	CEDAR	DUNDEE	1943		3,810	2 L	46.0		10	0	0	5	420	3,669						800
2F	CEDAR	RICHFIELD	1945		5,060	6 L	44.7		4	0	0	4	140	3,253	1,192,014					2,129
CEDAR TWP., 18N-9W, SECTIONS 27, 28, 32, 33 (MICHIGAN STRAY) CEDAR TWP., 18N-9W, SECTIONS 10, 27, 28, 33, 34 (DUNDEE & RICHFIELD)																				
2F	CEDAR CREEK	"BEREA"	1940	MUSKEGON	1,125	7 L		DUNDEE	2,252	7	0	0	0	0	0	0	0	0	0	637,019
CEDAR CREEK TWP., 11N-15W, SECTIONS 7, 17, 18, 19, 20, 32																				
2F	CEDAR CREEK, SEC. 23	TRVERSE	1949	MUSKEGON	1,951	2 L		DUNDEE	2,453	2	0	0	0	0	0	0	0	0	0	53
CEDAR CREEK TWP., 11N-15W, SECTION 23																				
2F	CHASE	"BEREA"	1943	LAKE	2,460	4 SL		DETROIT RIVER	3,734	2	0	0	1	20	274	9,766				488
CHASE TWP., 17N-11W, SECTIONS 19, 29																				
2F	CHERRY GROVE	TRVERSE	1952	WEXFORD	3,145	4 D		DUNDEE	3,998	1	0	0	0	0	0	0	0	0	0	481
CHERRY GROVE TWP., 21N-10W, SECTION 27																				
2F	CHERRY GROVE SEC. 13	MICHIGAN STRAY	1957	WEXFORD	1,326	35 S		DUNDEE	4,080	5	0	0	0	0	0	0	0	0	0	943,213
CHERRY GROVE TWP., 21N-10W, SECTION 13																				
CLAM LAKE TWP., 21N-9W, SECTIONS 7, 18																				
2F	CHESANING	TRVERSE	1979	SAGINAW	2,343	7 L	40-45	DUNDEE	2,914	1	1	0	1	40	498	498				13
CHESANING TWP., 9N-3E, SECTION 20																				
2F	CHESHIRE	TRVERSE	1947	ALLEGAN	1,289	2 L	35	TRVERSE	1,348	3	0	0	0	0	0	0	0	0	0	310
CHESHIRE TWP., 1N-14W, SECTIONS 26, 27																				
2F	CHESTER	ANTRIM	1965	OTSEGO	1,360	7 SH		NIAGARAN	6,870	16	0	0	16	640		134,081	1,203,689			90
CHESTER TWP., 29N-2H, SECTIONS 10, 11, 14, 15, 16																				
2F	CHESTERFIELD	NIAGARAN	1962	MACOMB	2,508	7 D	40.3	CLINTON	2,707	7	0	0	1	280	1,260	59,501				124,021
CHESTERFIELD TWP., 3N-14E, SECTIONS 28, 29																				
2F	CHINA BELLE	NIAGARAN REEF	1963	ST. CLAIR	2,365	15 D		NIAGARAN	2,451	3	0	0	0	0	0	0	0	0	0	459,002
CHINA TWP., 4N-16E, SECTIONS 34, 35																				
GAS RESERVOIR PRODUCING SMALL QUANTITIES OF OIL																				
2F	CHINA, SEC. 12	NIAGARAN REEF	1962	ST. CLAIR	2,509	11 D	39.1	CLINTON	2,631	2	0	0	0	0	0	0	0	0	0	27,570
CHINA TWP., 4N-16E, SECTION 12																				
2F	CHINA, SEC. 31	SALINA	1959	ST. CLAIR	2,378	13 D		CLINTON	2,641	1	0	0	0	0	0	0	0	0	0	149
CHINA TWP., 4N-16E, SECTION 31																				

POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL		GF ACTIVE GAS FIELD OR POOL		G-C GAS-CONDENSATE FIELD OR POOL		GS GAS STORAGE RESERVOIR												
ABANDONED OIL FIELD OR POOL		AGF ABANDONED GAS FIELD OR POOL		AG-C ABANDONED GAS-CONDENSATE FIELD OR POOL																
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP	DEPTH IN FEET	THICKNESS AND LITHOLOGY	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS	DRILLED ACRES	OIL PRODUCTION - BBLs	GAS PRODUCTION - Mcf	RECOVERY PERCENTAGE	TOTAL BARRELS OF OIL							
								TO COMP. IN 1979	ABAND. IN 1979	ACT. AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PER ACRE DRILLED (BBLs)	PER DAY				
2F	CHINA, SOUTH	SALINA-NIAGARAN REEF	1961	ST. CLAIR	2,324	14 D		CLINTON	2,743	11	0	0	5	440						533,912
CHINA TWP., 4N-16E, SECTIONS 25, 33, 34																				
COTTRELLVILLE TWP., 3N-16E, SECTIONS 3, 4																				
2F	CHIPPEWA, SEC. 10	TRVERSE	1961	ISABELLA	2,324	1 L		TRVERSE	3,220	1	0	0	0	0	0	0	0	0	0	125
CHIPPEWA TWP., 14N-3W, SECTION 10																				
2F	CLARE CITY	MICHIGAN STRAY	1937	CLARE-ISABELLA	1,290	5 S		DUNDEE	3,865	8	0	0	1	720						2,340,890
GRANT TWP., 17N-4W, SECTIONS 25, 26, 35, 36																				
SHERIDAN TWP., 17N-3W, SECTION 31																				
WISE TWP., 16N-3W, SECTION 6																				
2F	CLARE CITY	MICHIGAN STRAY	1938	CLARE-ISABELLA	1,303	2 S	30.2	DUNDEE	3,853	7	0	0	4	120	958	84,204				702
GRANT TWP., 17N-4W, SECTIONS 24, 35, 36																				
WISE TWP., 16N-3W, SECTION 6																				
2F	CLARENCE 19-15-4W	REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																		
2F	CLARENCE 19-15-4W POOL A	SALINA-NIAGARAN REEF	1977	CALHOUN	3,090	20 D		NIAGARAN	3,355	4	0	0	4	200	71	281	306,436	807,593		1
2F	CLARENCE 19-15-4W POOL B	SALINA-NIAGARAN A-1 CARBONATE	1978	CALHOUN	3,196	10 D														





POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL		GF ACTIVE GAS FIELD OR POOL		G-C GAS-CONDENSATE FIELD OR POOL		GS GAS STORAGE RESERVOIR										
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC	COUNTY TOWNSHIP	PAY ZONE		DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS		OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE DRLLED (BBLs)	TOTAL BARRELS BRINE PER DAY			
				DEPTH IN FEET	THICKNESS AND LITHOLOGY			TO END	COMPL IN	ABAND IN	ACTIVE AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979			PRODUCED IN 1979	CUMULATIVE THROUGH 1979	
GF ELBERTOGE	TRAVERSE	1961	OCEANA	2,112	2 L	39.4	REED CITY	2,725	19	0	0	3	380		415,067	SHUT-IN	1,092	
ELBERTOGE TWP., 15N-16W, SECTIONS 22, 26, 27, 28																		
AGF ELKLAND	DUNDEE	1946	TUSCOLA	2,653	14 L		SYLVANIA	3,735	2	ABANDONED 1947	20				1,546		77	
ELKLAND TWP., 14N-11E, SECTION 31 NOVESTA TWP., 13N-11E, SECTION 6																		
GF ELMWOOD	DUNDEE	1945	TUSCOLA	2,740	6 L	31.3	BOIS BLANC	2,945	10	0	1	6	90	2,474	105,100		1,168	
ELMWOOD TWP., 14N-10E, SECTIONS 17, 20, 21																		
GF ENSLEY	MARSHALL	1958	NEWAYGO	826	5 S		DETROIT RIVER	3,018	8	0	7	1	1,280		SHUT-IN		924,759	
AGF	TRAVERSE	1954		2,435	2 L				6	ABANDONED 1959	120			70,415			587	
ENSLEY TWP., 11N-11W, SECTIONS 6, 7, 8, 17, 18 GRANT TWP., 11N-12W, SECTION 12 (MARSHALL) ENSLEY TWP., 11N-11W, SECTIONS 6, 7, 8 (TRAVERSE)																		
GF ENTERPRISE	RICHFIELD	1943	MISSAUKEE-ROSCOMMON	4,405	15 D	41.8	RICHFIELD	4,625	38	2	1	22	1,560	138,820	3,485,302	60,633	1,619,223	2,234
ENTERPRISE TWP., 23N-5W, SECTIONS 10 THROUGH 14 LAKE TWP., 23N-4W, SECTION 18																		
GF ENTERPRISE, SEC. 32	MICHIGAN STRAY	1953	MISSAUKEE	1,986	5 S		DETROIT RIVER	4,200	2	0	0	2	320					DOMESTIC USE
ENTERPRISE TWP., 23N-5W, SECTION 32 BUTTERFIELD TWP., 22N-5W, SECTION 4																		
AGF ENTRICAN	TRAVERSE	1966	MONTCALM	2,870	4 L		DUNDEE	3,426	1	ABANDONED 1968	40				PRODUCTION COMBINED WITH DUNDEE			
AGF	DUNDEE	1967		3,312	2 D				2	ABANDONED 1973	40			8,014			200	
DOUGLASS TWP., 11N-7W, SECTION 21																		
GF ESSEXVILLE	DUNDEE	1944	BAY	2,835	17 L	35.3	SYLVANIA	4,130	50	0	0	41	1,730	33,732	3,659,972		3,249	2,116
HAMPTON TWP., 14N-6E, SECTIONS 7, 8, 9, 15, 16, 17, 18 HAMPTON TWP., 14N-5E, SECTION 12																		
AGF EVART	DUNDEE	1942	OSCEOLA	3,755	6 L	46.3	SYLVANIA	5,297	29	ABANDONED 1970	1,100				3,812,127			3,466
OSCEOLA TWP., 18N-8W, SECTIONS 21, 22, 23, 25, 26, 27, 28																		
AGF EVART	MICHIGAN STRAY	1941	OSCEOLA	1,410	7 S		DETROIT RIVER	4,457	33	ABANDONED 1974	5,120				4,993,636			
OSCEOLA TWP., 18N-8W, SECTIONS 19, 21, 22, 23, 26 THROUGH 35																		
AGF EXCELSIOR	TRAVERSE	1950	KALKASKA	2,003	2 L	33.4	TRAVERSE	2,136	1	ABANDONED 1970	10			10,455			1,046	
EXCELSIOR TWP., 27N-6W, SECTION 11																		
AGF EXCELSIOR 10-27N-6W	DETROIT RIVER	1972	KALKASKA	3,607	20 D		NIAGARAN	7,399	1	ABANDONED 1974	80			2,053			26	
EXCELSIOR TWP., 27N-6W, SECTION 10																		
GF FALMOUTH	MICHIGAN STRAY	1962	MISSAUKEE	1,279	3 S		REED CITY	4,035	8	0	0	1	1,280				1,124,871	DOMESTIC USE
AETNA TWP., 22N-6W, SECTIONS 30, 31 REEDER TWP., 22N-7W, SECTIONS 25, 36																		
GF FALMOUTH	TRAVERSE	1977	MISSAUKEE	3,166	21 L		TRAVERSE	3,187	1	0	0	1	160					
GF	DUNDEE	1978		3,851	2 D	45	AMHERSTBURG	5,250	5	4	1	4	200		PRODUCTION COMBINED WITH RICHFIELD			500
GF	RICHFIELD	1977		5,111	32 D		RICHFIELD	5,261	21	8	0	21	800	243,026	299,913	350,288	350,288	300
AETNA TWP., 22N-6W, SECTIONS 30, 31																		
AGF FERRY	TRAVERSE	1960	OCEANA	1,342	2 L	41.0	REED CITY	2,501	14	ABANDONED 1970	200			164,263			587	
FERRY TWP., 14N-16W, SECTIONS 16, 20, 21																		
GF FERRY, SEC. 25	"BEREA"	1961	OCEANA	1,310	5 D		REED CITY	2,650	1	0	0	1	40					DOMESTIC USE
FERRY TWP., 14N-16W, SECTION 25																		
GF FILLMORE	TRAVERSE	1940	ALLEGAN-OTTAWA	1,516	2.7 L	41.1	NIAGARAN	3,045	63	0	0	4	770	1,451	986,022		1,281	55
GF	SALINA A-2 CARB	1959		2,632	16 D				11	0	0	6	1,500		126,540	5,096,683		
GF	SALINA A-1 CARB	1959		2,792	16 D								1,600		PRODUCTION COMBINED WITH SALINA A-2 ABOVE			
FILLMORE TWP., 14N-15W, SECTIONS 2, 3, 11, 12 HOLLAND TWP., 5N-15W, SECTIONS 27, 34, 35 (TRAVERSE OIL)																		
FILLMORE TWP., SECTIONS 2, 3, HOLLAND TWP., SECTIONS 34, 35 (SALINA GAS)																		
AGF FOREST RIVER	TRAVERSE	1965	OCEANA	1,954	1 L		DUNDEE	2,598	1	ABANDONED 1965	40			781			20	
COLFAX TWP., 16N-15W, SECTION 12																		
AGF FORK	DUNDEE	1942	MECOSTA	3,845	8 L	49.0	BOIS BLANC	5,294	6A	ABANDONED 1969	2,700			7,777,026			2,880	
AGF	RICHFIELD	1945		5,001	11 D	54.8			1	ABANDONED 1966				PRODUCTION COMBINED WITH FORK DUNDEE			849,775	
FORK TWP., 16N-7W, SECTIONS 4, 5, 6, 7, 8, 16, 18 CHIPPEWA TWP., 16N-8W, SECTIONS 1, 12																		
AGF FORK, EAST	MICHIGAN STRAY	1942	MECOSTA	1,480	5 S		DUNDEE	3,865	4	ABANDONED 1946	640				104,762			
FORK TWP., 16N-7W, SECTIONS 2, 11																		
GF FORK, NORTH	MICHIGAN STRAY	1956	OSCEOLA	1,433	19 S		DUNDEE	3,982	1	0	0	1	160		5,170	102,712		
GF	DUNDEE	1951		3,788	3 D	45.8			6	0	0	1	120		153,661	SHUT-DOWN	1,281	
ORIENT TWP., 17N-7W, SECTION 33 (MICHIGAN STRAY) SECTIONS 28, 33 (DUNDEE)																		
GF FORK, WEST	MICHIGAN STRAY	1943	MECOSTA	1,490	5 S		SYLVANIA	5,198	17	0	0	2	2,880			2,453,670		DOMESTIC USE
FORK TWP., 16N-7W, SECTIONS 5, 6, 7, 8, 16 CHIPPEWA TWP., 16N-8W, SECTIONS 1, 2 EVART TWP., 17N-8W, SECTIONS 35, 36																		
AGF FORWARD	MICHIGAN STRAY	1961	MISSAUKEE	1,393	7 S		DETROIT RIVER	5,225	6	ABANDONED 1969	960				476,757			
RIVERSIDE TWP., 21N-7W, SECTIONS 25, 36 CLAM UNION TWP., 21N-6W, SECTION 31																		
GF FOSTORIA	BEREA	1970	TUSCOLA	1,514	16 S		RICHFIELD	3,267	1	0	0	1	160					SHUT-IN
WATERTOWN TWP., 10N-9E, SECTION 14																		
GF FOUNTAIN	REED CITY	1970	MASON	2,442	6 D		REED CITY	2,448	1	0	0	1	40		170	SHUT-IN		4
SHERMAN TWP., 19N-16W, SECTION 12																		
REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																		
GF FOWLerville	SALINA-NIAGARAN	1961	LIVINGSTON	3,880	45 D		PRAIRIE DU CHIEN	5,695	18	0	2	15	2,560	509	6,974	1,236,174	6,618,131	3
HANDY TWP., 3N-3E, SECTIONS 1, 2, 12 CONWAY TWP., 4N-3E, SECTION 35 HOWELL TWP., 3N-NE, SECTION 7																		
AGF FREEDOM	TRAVERSE	1971	WASHTENAW	1,038	24 L			4,691	3	ABANDONED 1973	120				SHUT-IN			
AGF	DUNDEE	1971		1,198	28 L					ABANDONED 1973	120				SHUT-IN			
AGF	TRENTON	1954		3,963	20 D	43.5			1	ABANDONED 1956	40			7,217			180	
FREEDOM TWP., 35-4E, SECTIONS 6, 8																		
REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																		
GF FREEHAN-REDDING	DUNDEE	1938	CLARE	3,885	19 L	44.4	SYLVANIA	5,462	170	0	0	17	2,800	26,161	16,831,693		1,945,432	6,011
REDDING TWP., 19N-6W, SECTIONS 27, 29, 32, 33, 34 FREEHAN TWP., 18N-6W, SECTIONS 3, 4																		
AGF FREEHAN, SEC. 15	DUNDEE	1963	CLARE	3,894	8 L	41.0	DUNDEE	3,902	1	ABANDONED 1965	40			736				18
FREEHAN TWP., 18N-6W, SECTION 15																		

POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL		GF ACTIVE GAS FIELD OR POOL		G-C GAS-CONDENSATE FIELD OR POOL		GS GAS STORAGE RESERVOIR										
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC	COUNTY TOWNSHIP	PAY ZONE		DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS		OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE DRLLED (BBLs)	TOTAL BARRELS BRINE PER DAY			
				DEPTH IN FEET	THICKNESS AND LITHOLOGY			TO END	COMPL IN	ABAND IN	ACTIVE AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979			PRODUCED IN 1979	CUMULATIVE THROUGH 1979	
AGF FREEPORT	TRAVERSE	1949	BARRY	2,031	3 L		DETROIT RIVER	2,430	1	ABANDONED 1951	10				19,229			1,923
CARLTON TWP., 4N-8W, SECTION 6																		
AGF FREMONT	MICHIGAN STRAY	1941	ISABELLA	1,235	5 S		DUNDEE	3,700	5	ABANDONED 1956	800							386,957
AGF	DUNDEE	1938		3,696	4 D						30			3,045				102
FREMONT TWP., 13N-5W, SECTIONS 20, 21, 22, 27, 28 (MICHIGAN STRAY) SECTIONS 5, 8 (DUNDEE)																		
GF FREMONT, SEC. 32	MICHIGAN STRAY	1958	ISABELLA	1,264	6 S		DUNDEE	3,619	1	0	0	1	160					27,677
AGF	TRAVERSE	1957		3,058	2 L				1	ABANDONED 1958	10			892				89
FREMONT TWP., 13N-5W, SECTION 32																		
AGF FREMONT	BEREA DUNDEE	1937	SAGINAW	2,122	3 S		DUNDEE	3,150	1	ABANDONED 1941	10			2,000	(DUNDEE AND BEREA PRODUCTION COMBINED)			100
FREMONT TWP., 11N-2E, DUNDEE SECTION 3, BEREA SECTION 5																		
AGF GARFIELD	DETROIT RIVER	1946	CLARE	5,038	10 S		SYLVANIA	5,307	1	ABANDONED 1948	40			13,769			546,527	344
GARFIELD TWP., 17N-6W, SECTION 18																		
AGF GENEVA	DUNDEE	1935	MIDLAND	3,671	2 L		DETROIT RIVER	3,898	8	ABANDONED 1969	70			63,143				902
GENEVA TWP., 15N-2W, SECTIONS 19, 20, 29 ABANDONED IN 1960, REACTIVATED IN 1967																		
AGF GENEVA	TRAVERSE	1940	VAN BUREN	1,042	2 L	31.5	TRENTON	2,950	77	ABANDONED 1973	760			495,063				651
GENEVA TWP., 15-16W, SECTIONS 20, 21, 22, 27, 28, 29, 32, 33																		
GF GENEVA, SEC. 4	DUNDEE	1975	MIDLAND	3,718	32 L		DUNDEE	3,795	1	0	0	1	40	1,076	6,547			164
GENEVA TWP., 15N-2W, SECTION 4																		
GF GENEVA, SEC. 15	TRAVERSE	1975	MIDLAND	3,186	2 L		DETROIT RIVER	3,990	1	0	0	1	40	374	1,469			37
GENEVA TWP., 15N-2W, SECTION 15																		
AGF GIBSON	TRAVERSE	1935	BAY	2,036	4 L		DETROIT RIVER	4,343	12	ABANDONED 1957	130			51,892				399
AGF	DUNDEE	1950		2,942	4 L				1	ABANDONED 1952				PRODUCTION COMBINED WITH GIBSON TRAVERSE				
GIBSON TWP., 18N-3E, SECTIONS 1, 2, 11, 12 DUNDEE PRODUCTION -- SECTION 2																		
GF GIBSON, SEC. 20	DUNDEE	1951	BAY	3,097	11 L		DUNDEE	3,195	3	0	0	2	30	801	36,881			1,229
GIBSON TWP., 18N-3E, SECTIONS 20, 29																		
GF GILBERT LAKE	TRAVERSE	1956	OCEANA	2,032	8 L	42.5	REED CITY	2,711	5	0	0	1	50		60,031			1,201
COLFAX TWP., 16N-15W, SECTIONS 34, 35																		
AGF GILMORE	MICHIGAN STRAY	1945	ISABELLA	1,560	3 S		DUNDEE	4,091	6	ABANDONED 1952	320							207,378
GILMORE TWP., 16N-5W, SECTIONS 25, 26, 36 VERNON TWP., 16N-4W, SECTION 31																		
GF GILMORE	DUNDEE	1955	ISABELLA															

POOL CLASSIFICATION				OF ACTIVE OIL FIELD OR POOL				OF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				GS GAS STORAGE RESERVOIR			
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC	COUNTY TOWNSHIP PRODUCING SECTIONS	PAY ZONE			DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS				OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS BRINE PER DAY	
				DEPTH IN FEET	THICKNESS AND LITHOLOGY	OIL GRAVITY A.P.I.			TO END	COMP IN	ABAND IN	ACTIVE AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979			
CF HAMLIN 12-1N-3K	NIAGARAN REEF	1974	EATON	3,657	5	D	NIAGARAN	3,805	3	0	1	2	320	22,824	182,058	46,004	352,271	569	65
HAMLIN TWP., 1N-3W, SECTIONS 2, 10																			
CF HAMLIN 12-1N-3K	NIAGARAN REEF	1977	EATON	3,720	20	D	NIAGARAN	4,180	2	0	0	2	240	34,975	46,437	15,948	20,381	195	
HAMLIN TWP., 1N-3W, SECTION 12																			
CF HAMLIN 13-1N-3K	NIAGARAN REEF	1977	EATON	3,924	11	D	NIAGARAN	4,008	1	0	0	1	160	5,547	12,593	111,600	176,317	79	6
HAMLIN TWP., 1N-3W, SECTION 13																			
GF HAMLIN 15-1N-3K	NIAGARAN REEF	1979	EATON	3,608	48	D	NIAGARAN	3,825	1	1	0	1	80						
HAMLIN TWP., 1N-3W, SECTION 15																			
GF HAMLIN 22-1N-3K	NIAGARAN REEF	1977	EATON	3,520	22	D	NIAGARAN	4,020	1	0	0	1	80			279,456	333,746		
HAMLIN TWP., 1N-3W, SECTION 22																			
GF HAMLIN 23-1N-3K	NIAGARAN REEF	1974	EATON	3,640	38	D	NIAGARAN	3,808	2	0	0	2	160	184	3,244	87,567	1,196,798	20	1
HAMLIN TWP., 1N-3W, SECTION 23																			
OF HANOVER	TRENTON-BLK. RIVER	1959	JACKSON	4,012	120+	43.0	PRAIRIE DU CHIEN	4,604	10	0	0	1	180		1,319,470		597,737	7,330	
HANOVER TWP., 4S-2W, SECTIONS 8, 9																			
OF HARDY DAM	REED CITY	1966	MECOSTA	3,351	5	D	44.8	DETROIT RIVER	3,482	22	0	0	15	880	13,609	1,169,994		1,330	1,720
AETNA TWP., 13N-10W, SECTIONS 5, 6, 7, 8																			
AGF HARRISON	MICHIGAN STRAY	1945	CLARE	1,675	3	S	SYLVANIA	5,633	7	ABANDONED 1962			760			610,434			
OF	DUNDEE	1945		4,190	13	L	39.7			2	0	0	2	80	2,076	169,614		2,120	53
LINCOLN TWP., 18N-5W, SECTIONS 1, 12, 13 HATTON TWP., 18N-4W, SECTIONS 6, 7 (MICHIGAN STRAY) DUNDEE IN HATTON TWP., SECTION 7																			
ADF HART	TRAVERSE	1933	OCEANA	1,911	54	D	34.0	ST. PETER SS.	5,531	17	ABANDONED 1936		150		116,275			775	
HART TWP., 15N-17W, SECTION 36 ELBRIDGE TWP., 15N-16W, SECTION 31																			
AGF HARTWICH	MICHIGAN STRAY	1968	OSCEOLA	1,681	25	S		MICHIGAN STRAY	1,706	1	ABANDONED 1977		160				18,100		
HARTWICH TWP., 19N-8W, SECTION 11																			
ADF HATTON	DUNDEE	1941	CLARE	3,945	2	L	DUNDEE	4,000	4	ABANDONED 1948		160		139,272				870	
HATTON TWP., 18N-4W, SECTION 31 LINCOLN TWP., 18N-5W, SECTION 36																			
ADF HAWKHEAD	TRAVERSE	1946	ALLEGAN	1,103	1	L	36.0	DETROIT RIVER	1,385	16	ABANDONED 1960		160		68,292			427	
CASCO TWP., 1N-16W, SECTIONS 20, 29																			
OF HAY, SEC. 34	BEREA	1979	GLADWIN	2,210	6	S		DETROIT RIVER	4,130	1	1	0	1	40					85
HAY TWP., 18N-1E, SECTION 34																			
GF HEADQUARTERS	MICHIGAN STRAY	1945	CLARE-ROSCOMMON	1,340	6	S		BOIS BLANC	5,929	12	ABANDONED 1975		1,760						
OF	TRAVERSE	1941		3,356	5	L	42.3			47	0	0	2	1,400				175	
OF	DUNDLE	1958		3,899	12	L	39.9			1	0	0	1	10				1	
OF	DETROIT RIVERS 2	1942		4,946	13	D	43.7												
OF	RICHFIELD	1952		5,147	23	D	42.6			60	0	1	38	2,320	64,253	10,833,133	4,248,560	4,670	119
ROSCOMMON TWP., 21N-3W, SECTIONS 17, 19, 20, 21, 28, 29, 30, 32, 33, 34 THE 38 WELLS INCLUDE 14 RICHFIELD, 18 SOUR ZONE & FRANKLIN TWP., 20N-3W, SECTIONS 3, 4, 10, 11, 15 6 RICHFIELD & SOUR ZONE																			
OF HEATH	TRAVERSE	1948	ALLEGAN	1,498	2	L	38.0	SALINA	2,716	25	0	0	3	270	1,428	215,118		797	3
HEATH TWP., 3N-14W, SECTIONS 11, 12, 13, 14																			
AGF HEATH, SEC. 21	SALINA	1960	ALLEGAN	2,492	19	D		SALINA	2,789	1	ABANDONED 1965		160			64,699			
HEATH TWP., 3N-14W, SECTION 21																			
ADF HEATH, SEC. 35	TRAVERSE	1945	ALLEGAN	1,468	2	L		TRAVERSE	1,470	1	ABANDONED 1946		10		559			56	
HEATH TWP., 3N-14W, SECTION 35																			
OF HENDERSON, SEC. 23	RICHFIELD	1975	WEXFORD	4,894	8	D		AMHERSTBURG	4,970	1	0	0	1	40		141			4
HENDERSON TWP., 21N-11W, SECTION 23																			
OF HENRIETTA	TRENTON	1979	JACKSON	5,060	34	L	42.9	PRAIRIE DU CHIEN	5,653	2	2	0	2	120	7,919	7,919			66
HENRIETTA TWP., 15-1E, SECTION 7																			
GF HERSEY	MICHIGAN STRAY	1971	OSCEOLA	1,510	3	S		MICHIGAN STRAY	1,638	8	0	0	4	1,280		5,110	219,554		1
HERSEY TWP., 17N-9W, SECTIONS 26, 35, 36																			
REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																			
ADF HILLIARDS	TRAVERSE	1944	ALLEGAN	1,576	1.2	L		NIAGARAN	3,157	17	ABANDONED 1961		300		124,401			415	
GF	SALINA A-1 CARB	1958		2,938	30	D				6	0	0	3	960	486	16,065	38,866	2,323,673	17
HOPKINS TWP., 3N-12W, SECTIONS 4, 5 (TRAVERSE) DORR TWP., 4N-12W, SECTION 34 HOPKINS TWP., 3N-12W, SECTIONS 3, 4, 10 (SALINA)																			
ADF HOLTON	TRAVERSE	1948	MUSKEGON	1,993	1	L	37.3	DUNDEE	2,554	3	ABANDONED 1963		60		95,911			1,599	
HOLTON TWP., 12N-15W, SECTIONS 4, 9																			
OF HOME, SEC. 26	TRAVERSE	1964	MONTCALM	3,096	10	L	45.3	REED CITY	3,618	2	0	0	1	20	619				
OF	DUNDEE	1970		3,513	7	L				4	0	0	4	200	3,805	95,023		431	300
HOME TWP., 12N-6W, SECTIONS 26, 27 (TRAVERSE) SECTION 27 (DUNDEE) THE 5 WELLS INCLUDE 1 TRAVERSE, 2 DUNDEE AND 2 TRAVERSE AND DUNDEE COMBINGLED																			
OF HOPE	TRAVERSE	1939	BARRY	1,869	3	L	37.6	PRAIRIE DU CHIEN	4,944	66	0	0	37	650	6,052	688,406		1,059	5
HOPE TWP., 2N-9W, SECTIONS 26, 27, 28, 33, 34, 35 BARRY TWP., 1N-9W, SECTIONS 1, 2, 3, 12																			
ADF HOPKINS	TRAVERSE	1939	ALLEGAN	1,633	4	L	41.5	DETROIT RIVER	1,965	10	ABANDONED 1956		110		145,513			1,323	
HOPKINS TWP., 3N-12W, SECTIONS 22, 23																			
OF HOPKINS, SOUTH	TRAVERSE	1948	ALLEGAN	1,538	3	L	38.0	TRAVERSE	1,611	35	0	0	1	330		270,813		821	1
HOPKINS TWP., 3N-12W, SECTIONS 19, 30, 31, 32																			
ADF HOPKINS, WEST	TRAVERSE	1941	ALLEGAN	1,371	2	L	41.5	CLINTON	3,140	31	ABANDONED 1951		370		388,772			1,051	
ADF	SALINA	1956		2,755	7	D	17.9			2	ABANDONED 1968		20		1,849			92	
HOPKINS TWP., 3N-12W, SECTIONS 7, 18																			
REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																			
ADF HUBBARDSTON	DUNDEE	1947	IONIA	3,028	5	L		DUNDEE	3,072	5	ABANDONED 1959		50		48,479			970	
NORTH PLAINS TWP., 8N-5W, SECTION 4																			
ADF HUBER	TRAVERSE	1955	NEWAYGO	2,109	2	L	41.3	DETROIT RIVER	3,400	13	ABANDONED 1978		260		557,540			2,144	
DENVER TWP., 14N-14W, SECTIONS 4, 5, 8																			

POOL CLASSIFICATION				OF ACTIVE OIL FIELD OR POOL				OF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				GS GAS STORAGE RESERVOIR				
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC	COUNTY TOWNSHIP PRODUCING SECTIONS	PAY ZONE			DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS				OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS BRINE PER DAY		
				DEPTH IN FEET	THICKNESS AND LITHOLOGY	OIL GRAVITY A.P.I.			TO END	COMP IN	ABAND IN	ACTIVE AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979				
OF INGHAM 12-2N-1E	SALINA-NIAGARAN REEF	1973	INGHAM	4,186	60	D	NIAGARAN	4,450	4	0	0	4	320	50,725	534,157	45,169	265,715	1,669	139	
INGHAM TWP., 2N-1E, SECTION 12																				
OF INGHAM 13-2N-1E	NIAGARAN REEF	1972	INGHAM	4,190	30	D	41	TRENTON	6,224	5	0	0	5	400	84,281	751,697	128,341	647,917	1,879	48
INGHAM TWP., 2N-1E, SECTION 13																				
OF INGHAM 25-2N-1E	SALINA-NIAGARAN REEF	1973	INGHAM	4,048	66	D		CLINTON	4,600	3	0	0	3	320	70,085	512,160	76,805	284,336	1,601	278
INGHAM TWP., 2N-1E, SECTION 25																				
OF IOSCO 28-2N-3E	NIAGARAN	1979	LIVINGSTON	3,819	7	D	30	NIAGARAN	4,260	1	1	0	1	80		3,378	3,378		42	200
IOSCO TWP., 2N-3E, SECTION 28																				
REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																				
AGF ISABELLA	MICHIGAN STRAY	1949	ISABELLA	1,454	7	S		DETROIT RIVER	3,993	6	ABANDONED 1956		240					342,506		
OF	DUNDEE	1948		3,783	9	D	46.9			20	0	0	1	370		521	828,864		137,806	2,240
ISABELLA TWP., 15N-4W, SECTIONS 7, 18 (MICHIGAN STRAY) ISABELLA TWP., SECTIONS 7, 18 NOTTAWA TWP., 15N-5W, SECTIONS 12, 13 (DUNDEE)																				
AGF ITHACA	MICHIGAN STRAY	1943	GRATIOT	900	16	S		DUNDEE	3,419	5	ABANDONED 1965		800					1,551,415		
ARCADIA TWP., 11N-3W, SECTIONS 25, 35, 36																				
OF JEFFERSON	TRAVERSE	1961	CASS	710	3	L	32.0	PRAIRIE DU CHIEN	2,603	36	4	0	16	720	13,794				443	
OF	SYLVANIA	1975	CASS	974	1	0	0	1	40	881					152,313			200		
JEFFERSON TWP., 7S-15W, SECTIONS 22, 23, 26, 27, 35 TRAVERSE ABANDONED IN 1971, REACTIVATED IN 1975																				
OF JEROME	DUNDEE	1947	MIDLAND	3,753	10	L	39.0	DETROIT RIVER	4,001	12	0	1	2	260	2,840	254,027			977	1
JEROME TWP., 15N-1W, SECTIONS 6, 7, 8																				
OF JOHNSTOWN	TRAVERSE	1951	BARRY	1,870	2	L	37.0	TRAVERSE	1,899	5	0	0	2	50	110	38,668			773	1
JOHNSTOWN TWP., 1N-9W, SECTIONS 7, 8, 17																				
OF JUNO LAKE	TRAVERSE	1978	CASS	724	6	D	36	TRAVERSE	730	3	2	0	3	120	440	440			4	44
CALVIN TWP., 7S-14W, SECTION 31																				
OF KAWKAWLIN	BEREA	1941	BAY	1,505	4	S	38.0	ST. PETER SS.	10,477	4	0	0	4	40	1,424				3	

POOL CLASSIFICATION				OF ACTIVE OIL FIELD OR POOL				GF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				GS GAS STORAGE RESERVOIR			
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP PRODUCING SECTIONS	PAY ZONE			DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS			DRILLED ACRES		OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS DRILLED PER DAY
				DEPTH IN FEET	THICKNESS AND LITHOLOGY	OIL GRAVITY & API			TO END	COMP IN	ABAND IN	ACTIVE AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979			
OF LEE 13-15-5W	NIAGARAN REEF	1973	CALHOUN	3,184	10 D	26.3	FRANCONIA	6,000	6	1	0	6	240	28,229	266,601	9,283	221,304	1,111	108
GF LEE 13-15-5W POOL A	NIAGARAN REEF	1973	CALHOUN	3,165	20 D		CLINTON	3,623	3	0	0	3	160		219	195,765	1,345,025	1	
LEE TWP., 15-5W, SECTION 13																			
OF LEE 14-15-5W	NIAGARAN REEF	1974	CALHOUN	3,198	6 D		CLINTON	3,631	2	0	0	2	80	21,322	221,500	10,367	111,706	2,769	155
OF LEE 14-15-5W POOL A	NIAGARAN REEF	1978	CALHOUN	3,132	10 D	28.7	NIAGARAN	3,256	1	0	0	1	40	5,554	12,165			304	
LEE TWP., 15-5W, SECTION 14																			
GF LEE 15-15-5W	NIAGARAN REEF	1974	CALHOUN	3,108	22 D		CLINTON	3,605	1	0	0	1	40		118		537,191	3	
OF LEE 15-15-5W POOL A	NIAGARAN REEF	1977	CALHOUN	3,164	17 D		NIAGARAN	3,300	1	0	0	1	40	17,085	58,703	3,201	35,676	1,468	16
OF LEE 15-15-5W POOL B	NIAGARAN REEF	1977	CALHOUN	3,210	10 D		NIAGARAN	3,225	2	0	0	2	80	441	1,766			22	
LEE TWP., 15-5W, SECTION 15																			
AGF LEE 17-15-5W	SALINA-NIAGARAN REEF	1972	CALHOUN	3,074	10 D		PRAIRIE DU CHIEN	4,896	1	ABANDONED 1973		160		512		GAS PRODUCTION INCLUDED WITH CAL-LEE		3	
LEE TWP., 15-5W, SECTION 17																			
AGF LEE 18-15-5W	NIAGARAN REEF	1976	CALHOUN	3,104	28 D		NIAGARAN	3,576	1	ABANDONED 1979		160		292	36,235				
LEE TWP., 15-5W, SECTION 18																			
OF LEE 23-15-5W	SALINA-NIAGARAN REEF	1979	CALHOUN	3,096	40 D	32.5	NIAGARAN	3,323	2	2	0	2	80	11,629	11,629			145	
LEE TWP., 15-5W, SECTION 23																			
AGF LEE 30-15-5W	NIAGARAN REEF	1975	CALHOUN	2,950	8 D		NIAGARAN	3,040	3	ABANDONED 1977		80		1,413				18	
GF LEE 30-15-5W POOL A	NIAGARAN REEF	1977	CALHOUN	2,939	5 D		NIAGARAN	3,100	1	0	0	1	80						
OF LEE 30-15-5W POOL B	SALINA A-1 CARBONATE	1977	CALHOUN	2,988	6 D	37.6	NIAGARAN	3,104	2	0	0	2	160	17,590	36,837			230	77
LEE TWP., 15-5W, SECTION 30																			
GF LEE 32-15-5W	SALINA E ZONE A-1 C. & NIAGARAN	1975	CALHOUN	2,557	48 D		CLINTON	3,415	2	0	0	2	80		1,877	55,391	88,476	23	2
LEE TWP., 15-5W, SECTION 32				REFER TO 1975 DISCOVERY WELL LSIT FOR PAY ZONE DETAILS															
OF LEE, SEC. 33	TRAVERSE	1971	ALLEGAN	1,155	5 L		TRAVERSE	1,160	2	0	0	1	20	445	5,607			280	28
LEE TWP., 15-5W, SECTION 33																			
GF LEE 34-15-5W	SALINA A-1 CARBONATE	1978	CALHOUN	2,985	5 D		NIAGARAN	3,165	1	0	0	1	80						
LEE TWP., 15-5W, SECTION 34																			
AGF LEE, SOUTH	TRAVERSE	1949	ALLEGAN	1,171	1 L		TRENTON	2,960	12	ABANDONED 1953		120		91,117				759	
LEE TWP., 15-5W, SECTION 31 CASCO TWP., 1N-16W, SECTION 36																			
REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																			
GS LENOX	REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																		
GF LENOX 24-4N-14E	NIAGARAN REEF	1977	MACOMB	2,780	8 D		NIAGARAN	2,900	1	0	0	1	40		189,235	212,253			
LENOX TWP., 4N-14E, SECTION 24																			
GF LEONARD	NIAGARAN REEF	1963	OAKLAND	4,245	21 D		CLINTON	4,450	14	0	0	14	640	18,176	106,882	684,487	4,206,127	167	
ADDITION TWP., 5N-11E, SECTIONS 14, 15, 22																			
GF LEROY	REED CITY	1965	OSCEOLA	3,796	4 D		REED CITY	3,800	2	0	0	2	80	1,681	44,907			561	1
LEROY TWP., 19N-10W, SECTION 27																			
OF LESLIE 4-1N-1W	SALINA-NIAGARAN REEF	1973	INGHAM	3,775	46 D		CLINTON	4,390	1	0	0	1	80	1,793	20,389			255	8
LESLIE TWP., 1N-1W, SECTION 4																			
AGF LIME LAKE	PRAIRIE DU CHIEN	1960	HILLSDALE	3,461	5 D	44.6	PRAIRIE DU CHIEN	3,533	1	ABANDONED 1965		20		7,842				392	
WRIGHT TWP., 8S-1W, SECTION 11																			
OF LINCOLN, SEC. 18	TRAVERSE	1957	ARENAC	2,717	1 L		DUNDEE	3,062	2	0	0	2	20	442	4,199			210	
LINCOLN TWP., 18N-4E, SECTION 18																			
OF LINCOLN, SEC. 27	DUNDEE	1974	ISABELLA	3,577	10 D		DUNDEE	3,711	2	0	0	2	80	884	14,445			181	20
LINCOLN TWP., 13N-4W, SECTIONS 27, 28																			
AGF LINCOLN, SEC. 31	DUNDEE	1963	ARENAC	2,942	10 D	34.9	DUNDEE	2,986	1	ABANDONED 1968		10		COMBINED WITH SECTION 18 PRODUCTION					
LINCOLN TWP., 18N-4E, SECTION 31																			
AGF LOGAN	RICHFIELD	1941	MASON	3,260	5 S		RICHFIELD	3,330	2	ABANDONED 1975		80						13,555	
LOGAN TWP., 17N-15W, SECTIONS 9, 16																			
GF LOGAN	WEIR	1949	OGEMAW	1,230	11 S		RICHFIELD	4,537						PRODUCTION COMBINED WITH BERA					
GF	BEREA	1944		1,420	6 S				16	0	0	14	2,240		8,093	1,302,648			
LOGAN TWP., 22N-4E, SECTIONS 16, 17, 18, 20, 23, 25, 26 CHURCHILL TWP., 22N-3E, SECTIONS 1, 11, 12																			
OF LUHT	TRAVERSE	1949	BAY	2,230	3 L	37.2	DUNDEE	3,240	5	0	0	1	50	376	197,394			3,948	1
PINCONNING TWP., 17N-4E, SECTION 29																			
AGF LUTHER	TRAVERSE	1965	LAKE	2,565	2 L	42.0	REED CITY	3,362	1	ABANDONED 1973		20		28,117				1,406	
NEWKIRK TWP., 19N-12W, SECTION 14																			
OF LUTHER, NORTH	REED CITY	1970	LAKE	3,518	17 D		REED CITY	3,556	4	0	0	4	160	13,064				82	
ELLSWORTH TWP., 19N-11W, SECTIONS 7, 8																			
GF LYNDON	TRAVERSE	1958	WASHTEWASHTON-LIVINGSTON	1,311	6 D		TRENTON	5,008	6	0	0	6	960			53,255	436,367	DOMESTIC USE	
GF	DETROIT RIVER	1959		1,733	11 D									PRODUCTION COMBINED WITH TRAVERSE					
LYNDON TWP., 15-3E, SECTIONS 6, 7 UNADILLA TWP., 1N-3E, SECTION 31																			
OF LYON, SEC. 18	NIAGARAN	1979	OAKLAND	3,616	28 D	35	CLINTON	3,917	1	1	0	1	80	4,592	4,592			57	
LYON TWP., 1N-7E, SECTION 18																			
OF MACON CREEK	TRENTON-BLK. RIVER	1961	LENAAWEE	2,540	36+ D		TRENTON-BLK. RIVER	3,303	1	0	0	1	40		1,062		SHUT-IN	27	30
MACON TWP., 5S-5E, SECTION 23																			
GF MAPLE VALLEY, SEC. 16	MICHIGAN STRAY	1958	MONTCALM	1,120	5 S		REED CITY	3,365	1	0	0	1	160						DOMESTIC USE
MAPLE VALLEY TWP., 11N-9W, SECTION 16																			
GF MARATHON	BEREA	1955	LAPEER	1,449	18 S		RICHFIELD	3,172	4	0	0	4	40					35,469	
GF	DUNDEE	1979		2,629	5 D	36		3,220	1	1	0	1	80						
OF	DETROIT RIVER S2	1969		3,013	47 D								720	PRODUCTION COMBINED WITH RICHFIELD					
OF	RICHFIELD	1971		3,102	8 D				14	2	0	14	320	3,433	97,356			94	
MARATHON TWP., 9N-9E, SECTIONS 16, 17, 18, 21 (DETROIT RIVER S2) SECTION 16 (BEREA) SECTION 18 (RICHFIELD) SECTION 18 (DUNDEE)																			

POOL CLASSIFICATION				OF ACTIVE OIL FIELD OR POOL				GF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				GS GAS STORAGE RESERVOIR				
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP PRODUCING SECTIONS	PAY ZONE			DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS			DRILLED ACRES		OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS DRILLED PER DAY	
				DEPTH IN FEET	THICKNESS AND LITHOLOGY	OIL GRAVITY & API			TO END	COMP IN	ABAND IN	ACTIVE AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979				
OF MARINE CITY	SALINA-NIAGARAN	1955	ST. CLAIR	2,176	21 D	38.0	CLINTON	2,428	18	0	0	13	660	12,898	478,150	210,402	6,162,225	724	107	
COTTRELLVILLE TWP., 3N-16E, SECTIONS 2, 3, 10, 11, 15																				
OF MARINE CITY SOUTH	SALINA-NIAGARAN	1962	ST. CLAIR	2,100	4 D	38.7	NIAGARAN	2,261	17	0	0	13	600	4,314	160,170			267	8	
GF	SALINA A-1 CARB.	1962		2,100	4 D											50,783	4,162,113			
COTTRELLVILLE TWP., 3N-16E, SECTIONS 14, 22, 23, 26, 27				GAS WELLS COMBINED WITH OIL WELL TOTALS																
REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																				
GS HARTON (WINTERFIELD)	REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																			
AGF HARNE	"BEREA"	1940	OTTAWA	1,170	3 L		TRAVERSE	1,904	2	ABANDONED 1946		20			6,253			313		
TALLMADGE TWP., 7N-13W, SECTION 5 WRIGHT TWP., 8N-13W, SECTION 32																				
GF HARSAC CREEK	SALINA-NIAGARAN REEF	1965	ST. CLAIR	2,450	190 D		CLINTON	2,903	5	0	0	5	200				1,681		4,024,523	8
CASCO TWP., 4N-15E, SECTIONS 29, 30																				
AGF MARTIN	TRAVERSE	1948	ALLEGAN	1,617	1 L	36.0	ST. PETER SS.	4,290	2	ABANDONED 1960		20					2,188		109	
MARTIN TWP., 2N-11W, SECTION 18																				
GF MARTINY	MICHIGAN STRAY	1934	MECOSTA	1,370	2 S		DETROIT RIVER	3,807	5	0	0	4	680				9,162	1,326,407		
MARTINY TWP., 15N-8W, SECTIONS 12, 22, 23																				
AGF MAYFIELD 33-25N-11W ANTRIM GAS POOL A	ANTRIM	1977	GD. TRAVERSE	1,804	50 SH		NIAGARAN	6,746	1	ABANDONED 1978		80								
MAYFIELD TWP., 25N-11W, SECTION 33																				
OF MCBAIN	DUNDEE	1959	MISSOAKEE	3,969	15 L	45.0	DUNDEE	3,973	24	0	0	22	920	44,864	3,296,069			3,583	9,200	
RIVERSIDE TWP., 21N-7W, SECTIONS 19, 20, 30 RICHLAND TWP., 21N-8W, SECTION 24																				
GF MCKAY	MICHIGAN STRAY	1929	CLARE	1,400	3 S		DETROIT RIVER	4,055	9	0	0	2	360					726,879	SHUT-IN	
GRANT TWP., 17N-4W, SECTION 6 SURREY TWP., 17N-5W, SECTION 1 HATTON TWP., 18N-4W, SECTION 31																				
AGF MEARS	TRAVERSE	1951	OCEANA	1,745	2.5 DL	36.1	REED CITY	2,347	11	ABANDONED 1959		110			105,807			622		
AGF	DUNDEE	1949		2,210	3 L	32.2			3	ABANDONED 1959		60			PRODUCTION COMBINED WITH MEARS TRAVERSE					
GOLDEN TWP., 15N-18W, SECTIONS 34, 35																				
GF MEC																				

POOL CLASSIFICATION				OF	ACTIVE OIL FIELD OR POOL	GF	ACTIVE GAS FIELD OR POOL	G-C	GAS-CONDENSATE FIELD OR POOL	GS	GAS STORAGE RESERVOIR			
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP PRODUCING SECTIONS	OF ABANDONED OIL FIELD OR POOL	PAY ZONE	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS	OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS BRINE PER DAY
									TO END	ABANDONED	PRODUCED IN 1979	CUMULATIVE THROUGH 1979		
GF NEWBURG	TRENTON	1979	CLINTON TWP., 55-4E, SECTION 14											
GF NEW LOTHROP	BEREA	1967	SHILAWASSEE-GENESEE											
AGF NEW RICHMOND	TRAVERSE	1965	ALLEGAN											
AGF NILES	TRAVERSE	1940	BERRIEN											
GF NORTH MORENCI	TRAVERSE	1962	LENAWEE											
AGF NORTH PORTER	TRAVERSE	1930	CASS											
GF NORTH STAR	MICHIGAN STRAY	1940	GRATIOT											
AGF NORTHVILLE	DUNDEE	1948	WASHTENAW-WAYNE GAKLAND											
GF NIAGARAN	NIAGARAN	1960	TRIDENT-BLK. RIVER											
GF NIAGARAN	NIAGARAN	1954	TRIDENT-BLK. RIVER											
GS NORTHVILLE	REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS CONVERTED TO GAS STORAGE AND SECONDARY RECOVERY JULY 2, 1968													
GF OLIVET	SALINA A-1 CARBONATE	1979	EATON											
AGF ONONDAGA 10-1N-2W	NIAGARAN REEF	1971	INGHAM											
GF ONONDAGA 17-1N-2W	SALINA-NIAGARAN REEF	1973	INGHAM											
GF ONONDAGA 17-1N-2W POOL A	SALINA-NIAGARAN REEF	1975	INGHAM											
GF ONONDAGA 17-1N-2W POOL B	NIAGARAN REEF	1978	INGHAM											
GF ONONDAGA 18-1N-2W	NIAGARAN REEF	1978	INGHAM											
GF ONONDAGA 18-1N-2W POOL A	SALINA-NIAGARAN REEF	1978	INGHAM											
GF ONONDAGA 20-1N-2W	NIAGARAN REEF	1976	INGHAM											
GF ONONDAGA 21-1N-2W UNIT A	NIAGARAN REEF	1971	INGHAM											
GF ONONDAGA 21-1N-2W UNIT B	NIAGARAN REEF	1972	INGHAM											
GS ORIENT	REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS													
AGF OTISVILLE	BEREA	1949	GENESEE-TUSCOLA											
AGF OTISVILLE	TRAVERSE	1941												
GF OTSEGO	DUNDEE	1944												
AGF OTSEGO	ANTRIM	1940												
AGF OTSEGO, SEC. 9	TRAVERSE	1950												
GF OTSEGO LAKE, SEC. 22	ANTRIM	1977												
GF OTTER LAKE	BEREA	1945												
GF OTTO, SEC. 30	"BEREA"	1958												
AGF OTTO, SEC. 32	TRAVERSE	1955												
GF OVERISEL	TRAVERSE	1938												
AGF OVERISEL, SEC. 11	TRAVERSE	1940												
GF OXBOW	TRAVERSE	1958												
GF PARADISE	TRAVERSE	1965												

POOL CLASSIFICATION				OF	ACTIVE OIL FIELD OR POOL	GF	ACTIVE GAS FIELD OR POOL	G-C	GAS-CONDENSATE FIELD OR POOL	GS	GAS STORAGE RESERVOIR			
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP PRODUCING SECTIONS	OF ABANDONED OIL FIELD OR POOL	PAY ZONE	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS	OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS BRINE PER DAY
									TO END	ABANDONED	PRODUCED IN 1979	CUMULATIVE THROUGH 1979		
GF PARIS	MICHIGAN STRAY	1951	MECOSTA											
GF TRVERSE	TRAVERSE	1949												
AGF DUNDEE	DUNDEE	1949												
GS PARTELLA	REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS													
AGF PAM PAW	TRAVERSE	1963												
AGF PAM PAW, SEC. 33	TRAVERSE	1964												
GF PLACOCK	TRAVERSE	1966												
AGF PECKS LAKE	DUNDEE	1967												
GF PENNFIELD 21-15-7W	SALINA-NIAGARAN REEF	1975												
GF PENNFIELD 29-15-7W	SALINA-NIAGARAN REEF	1973												
GF PENNFIELD 29-15-7W POOL A	SALINA-NIAGARAN REEF	1976												
GF PENNFIELD 35-15-7W	SALINA-NIAGARAN REEF	1974												
GF PENTWATER	TRAVERSE	1948												
GF PENTWATER LAKE	TRAVERSE	1969												
GF PETERS	SALINA-NIAGARAN REEF	1955												
GF PETERS, EAST	SALINA-NIAGARAN REEF	1961												
AGF PINCONNING	TRAVERSE	1953												
AGF PINE	TRAVERSE	1938												
AGF PINE RIVER	TRAVERSE	1956												
AGF PINE, SECS. 9 & 17	MICHIGAN STRAY	1951												
GF PIONEER	TRAVERSE	1931												
AGF PIPESTONE	TRAVERSE	1962												
GF POLKTON	TRAVERSE	1942												
GF PORTER	DUNDEE	1933												
AGF PORT HURON	DUNDEE	1886												
GF PORT HURON 31-7N-17E	NIAGARAN	1975												
GF PORT HURON 33-7N-17E	NIAGARAN REEF	1971												
GF PROSPER	MICHIGAN STRAY	1948												
GF PROSPER, SOUTH	DUNDEE	1967												
AGF PULLMAN	TRAVERSE	1949												
GF PULLMAN, EAST	TRAVERSE	1949												
AGF PUTTYGUT	TRAVERSE	1961												

POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL				GF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				GS GAS STORAGE RESERVOIR					
		OF ABANDONED OIL FIELD OR POOL				AGF ABANDONED GAS FIELD OR POOL				AG-C ABANDONED GAS-CONDENSATE FIELD OR POOL									
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC	COUNTY TOWNSHIP	PAY ZONE	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS	DRILLED ACRES	OIL PRODUCTION - BBLs	GAS PRODUCTION - Mcf	RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS BRINE PER DAY							
				DEPTH IN FEET	THICKNESS AND LITHOLOGY	OIL GRAVITY A P I	TO END IN 1 9 7 9	ABAND IN 1 9 7 9	ACTIVE AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	RECOVERED (BBLs)	PER ACRE (BBLs)		
AGF	RABBIT RIVER	TRAVERSE	1950	ALLEGAN	1,655	3 L			TRAVERSE	1,678	8	ABANDONED 1959	80		12,745		159		
SALEM TWP., 4N-13W, SECTIONS 28, 29, 32, 33																			
AGF	RABBIT RIVER 17-28N-7W	TRAVERSE	1972	KALKASKA	1,521	10 L			NIAGARAN	6,351	1	ABANDONED 1973	40		429		11		
RAPID RIVER TWP., 28N-7W, SECTION 17																			
GF	RAVENNA	"BEREA"	1936	MUSKEGON	1,205	10 D			DUNDEE	2,306	31	0	5	4,480			1,461,245	DOMESTIC USE	
RAVENNA TWP., 9N-14W, SECTIONS 4, 5, 6, 7, 8, 9, 17 SULLIVAN TWP., 9N-15W, SECTION 12 MOORLAND TWP., 10N-14W, SECTIONS 32, 33																			
GF	RAVENNA	TRAVERSE	1952	MUSKEGON	1,842	15 L			DETROIT RIVER	2,601	37	0	1	730			256	460,013	
RAVENNA TWP., 9N-14W, SECTIONS 21, 27, 28, 29, 30, 31 SULLIVAN TWP., 9N-15W, SECTIONS 25, 36																			
GF	RAVENNA, SEC. 27	"BEREA"	1953	MUSKEGON	1,182	6 D			DUNDEE	2,500	3	0	0	2	460			32,888	DOMESTIC USE
RAVENNA TWP., 9N-14W, SECTIONS 22, 27, 28																			
GS	RAY	REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																	
AGF	READING	TRENTON	1971	HILLSDALE	3,100	10 D	42		BLACK RIVER	3,478	2	ABANDONED 1973	80		5,431			68	
READING TWP., 7S-4W, SECTION 29																			
GF	REDDING	MICHIGAN STRAY	1940	CLARE	1,475	3 S			SYLVANIA	5,462	?	0	1	2	160			33,346	LEASE FUEL
REDDING TWP., 19N-6W, SECTIONS 27, 32 FREEMAN TWP., 18N-6W, SECTION 2																			
OF	REED CITY	TRAVERSE	1941	LAKE-OSCEOLA	2,925	5 L	43.7		ST. PETER SS.	8,917	?	0	0	4	1,600			3,992	3,703,748
OF	REED CITY	DUNDEE	1940		3,490	3 L	46.3											16,169,578	
OF	REED CITY	REED CITY	1941		3,585	7 D	42.8		(LOREED UNIT-SEE TABLE 6)			0	0	168	5,320			83,828	42,291,384
OF	REED CITY	DETROIT RIVER S2	1955		4,184	73 OL	48.2					45	1	0	21	1,800		45,240	2,590,234
OF	REED CITY	RICHFIELD	1954		4,633	12 SL	45.8											3,457,308	1,439
(TWO WELLS COMINGLED WITH SOUR ZONE)																			
LINCOLN TWP., 18N-10W, SECTIONS 17, 18, 19, 20, 29, 30, 31, 32 RICHMOND TWP., 17N-10W, SECTIONS 4 THROUGH 9																			
GS	REED CITY (STRAY)	REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																	
GS	REED CITY (LOREED)	REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																	
OF	REED CITY, EAST	TRAVERSE	1947	OSCEOLA	3,106	1 L	41.2		DETROIT RIVER	3,840	8	0	0	3	80			393,304	18,468
LINCOLN TWP., 18N-10W, SECTION 26																			
AGF	REEDER	MICHIGAN STRAY	1964	MISSAUKEE	1,385	4 S			DUNDEE	4,002	2	ABANDONED 1966	320						
REEDER TWP., 11N-7W, SECTION 32																			
AGF	REEMAN	TRAVERSE	1958	NEWAYGO	2,099	1 L			TRAVERSE	2,100	3	ABANDONED 1967	30					44,886	1,496
SHERIDAN TWP., 12N-14W, SECTION 8																			
OF	REYNOLDS	TRAVERSE	1955	MONTICM- MECOSTA	2,787	4 D	39.8		BASS ISLANDS	4,300	16	0	0	5	110			13,068	CUMULATIVE PRODUCTION COMBINED WITH REED CITY
OF	REED CITY	REED CITY	1954		3,343	2 D	44.3					53	0	0	8	2,100		16,632	4,727,133
REYNOLDS TWP., 12N-10W, SECTIONS 1, 2, 12, 13 WINFIELD TWP., 12N-9W, SECTIONS 6, 7, 8, 17, 18 AETNA TWP., 13N-10W, SECTION 36																			
GF	RICH	BEREA	1970	LAPEER	1,380	29 S			SYLVANIA	3,267	6	0	0	6	960				
OF	REED CITY	DETROIT RIVER S2	1962		3,028	5 D	33.9					32	6	0	30	1,200		152,158	1,185,154
RICH TWP., 10N-10E, SECTIONS 21, 22, 27 (BEREA) SECTIONS 21, 26, 27, 28, 34, 35 (DETROIT RIVER S2)																			
AGF	RICHLAND	TRAVERSE	1936	SAGINAW	2,739	10 L	46.0		DUNDEE	3,264	1	ABANDONED 1936	10					1,871	187
RICHLAND TWP., 12N-2E, SECTION 31																			
AGF	RICHLAND, SEC. 27	MICHIGAN STRAY	1963	MONTICM	1,247	1 S			DUNDEE	3,530	1	ABANDONED 1964	160						
RICHLAND TWP., 12N-5W, SECTION 27																			
AGF	RICHMOND	NIAGARAN REEF	1968	MACOMB	3,195	12 D			NIAGARAN	3,254	1	ABANDONED 1976	40					179,249	
RICHMOND TWP., 5N-14E, SECTION 26																			
GF	RICHMOND, SEC. 32	NIAGARAN	1979	MACOMB	3,247	21 D			NIAGARAN	3,326	1	1	0	1	40				
RICHMOND TWP., 5N-14E, SECTION 32																			
AGF	RIDGEWAY, SEC. 1	TRENTON	1954	LENAWEE	2,415	4 D			TRENTON	2,491	1	ABANDONED 1962	10					47	5
RIDGEWAY TWP., 6S-5E, SECTION 1																			
OF	RIVERSIDE	TRAVERSE	1961	MISSAUKEE	3,220	2 L	42.6		DUNDEE	3,953	1	0	0	1	10			622	23,220
OF	REED CITY	DUNDEE	1942		3,944	3 L	44.5					5	0	0	5	180		14,293	167,007
RIVERSIDE TWP., 21N-7W, SECTIONS 14, 23, 24																			
GS	RIVERSIDE (STRAY)	REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																	
AGF	RIVERTON	TRAVERSE	1957	MASON	1,650	6 L	38.5		DUNDEE	2,317	19	ABANDONED 1971	190					242,206	1,275
RIVERTON TWP., 17N-17W, SECTIONS 10, 11, 15																			
OF	RIVERTON, SEC. 21	TRAVERSE	1964	MASON	1,683	4 L	38.2		DUNDEE	2,290	3	0	0	2	30			754	16,153
RIVERTON TWP., 17N-17W, SECTION 21																			
AGF	ROBINSON, SEC. 3	DUNDEE	1956	OTTAWA	2,107	7 L			DUNDEE	2,210	2	ABANDONED 1972	20					10,630	531
ROBINSON TWP., 7N-15W, SECTION 3																			
OF	ROCKFORD	TRAVERSE	1945	KENT	2,204	3 L	44.0		DETROIT RIVER	2,850	23	0	0	3	210			2,756	572,135
ALGOMA TWP., 9N-11W, SECTIONS 25, 35, 36 COURTLAND TWP., 9N-10W, SECTION 19																			
GF	ROLLAND	MICHIGAN STRAY	1978	ISABELLA	1,314	14 S			MICHIGAN STRAY	1,328	2	0	0	2	80				
OF	REED CITY	DUNDEE	1979		3,560	6 D			REED CITY	3,755	1	1	0	1	40			1,079	1,079
ROLLAND TWP., 13N-6W, SECTION 13 (MICHIGAN STRAY), SECTION 24 (DUNDEE)																			
AGF	ROMULUS	SALINA A-1 CARB.	1955	WAYNE	1,980	20 D			NIAGARAN	2,259	2	ABANDONED 1972	320					45,946	
ROMULUS TWP., 3S-9E, SECTIONS 15, 16																			
OF	ROSEBUSH	DUNDEE	1933	ISABELLA	3,690	6 L	42.0		RICHFIELD	4,838	46	0	2	33	1,020				
OF	REED CITY	RICHFIELD	1969		4,790	4 D						80						27,611	2,384,958
(TWO WELLS COMINGLED WITH DUNDEE)																			
ISABELLA TWP., 15N-4W, SECTIONS 1, 2, 11, 12, 13 DENVER TWP., 15N-3W, SECTIONS 7, 18 VERNON TWP., 16N-4W, SECTION 36																			
OF	ROSE CITY	RICHFIELD	1942	OGEMAW	4,125	9 D	41.2		CAMBRIAN	12,996	132	0	0	69	5,160			254,046	7,694,840
FOSTER TWP., 24N-1E, SECTIONS 14, 20, 21, 23, 24, 25 FOSTER TWP., 24N-2E, SECTIONS 19, 20, 21, 27, 28, 29, 30, 31, 32, 33, 34, 35																			
OF	ROSE LAKE	TRAVERSE	1943	OSCEOLA	3,140	5 L	45.5		DETROIT RIVER	3,990	18	0	0	6	720			16,470	1,922,883
ROSE LAKE TWP., 19N-9W, SECTION 31 LEROY TWP., 19N-10W, SECTION 36 CEDAR TWP., 18N-9W, SECTION 6 LINCOLN TWP., 18N-10W, SECTION 1																			
GF	ROTHBURY	"BEREA"	1978	OCEANA	1,103	3 S			"BEREA"	1,120	1	0	0	1	40				
GRANT TWP., 13N-17W, SECTION 14																			

POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL				GF ACTIVE GAS FIELD OR POOL				G-C GAS-CONDENSATE FIELD OR POOL				GS GAS STORAGE RESERVOIR					
		OF ABANDONED OIL FIELD OR POOL				AGF ABANDONED GAS FIELD OR POOL				AG-C ABANDONED GAS-CONDENSATE FIELD OR POOL									
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC	COUNTY TOWNSHIP	PAY ZONE	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS	DRILLED ACRES	OIL PRODUCTION - BBLs	GAS PRODUCTION - Mcf	RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS BRINE PER DAY							
				DEPTH IN FEET	THICKNESS AND LITHOLOGY	OIL GRAVITY A P I	TO COMP IN 1 9 7 9	ABAND IN 1 9 7 9	ACTIVE AT END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	RECOVERED (BBLs)	PER ACRE (BBLs)		
OF	SAGE	DUNDEE	1971	GLADWIN					DETROIT RIVER	4,235	4	0	0	3	120			652	71,163
SAGE TWP., 19N-2W, SECTION 12																			
OF	SAGINAW	BEREA	1925	SAGINAW	1,825	16 S	46.1		SYLVANIA	3,920	?	0	0	5	1,500			4,926	1,710,164
SAGINAW TWP., 12N-4E, SECTIONS 10, 11, 12, 13, 14, 15, 24																			
OF	SALEM	TRAVERSE	1937	ALLEGAN-OTTAWA	1,583	8 L	38.3		TRENTON	4,347	337	0	2	84	3,390			36,132	9,339,068
AGF	DETROIT RIVER	1958			1,969	6 D						3	ABANDONED 1966	320					50,574
OF	SALINA	1937			2,725	2 D													
REFER TO GAS STORAGE RESERVOIRS-PRODUCES SMALL AMOUNT OF OIL-INCLUDED AS MISCELLANEOUS PRODUCTION IN ABANDONED TOTALS																			
SALEM TWP., 4N-13W, SECTIONS 16, 21 (DETROIT RIVER) SALEM TWP., 4N-13W, SECTIONS 1, 2, 3, 10 THROUGH 17, 20, 21, 22, 23, 24, 34																			
JAMESTOWN TWP., 5N-13W, SECTIONS 35, 36 (TRAVERSE)																			
GS	SALEM	REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																	
OF	SANFORD	TRAVERSE	1959	MIDLAND	3,125	2 L			DETROIT RIVER	4,811	13	0	0	10	260			2,988	212,212
OF	DUNDEE	1951			3,755	3 L	42.6												816
THE 10 WELLS INCLUDE 8 DUNDEE, 1 TRAVERSE AND 1 DUNDEE & TRAVERSE																			
JEROME TWP., 15N-1W, SECTIONS 12, 13																			
OF	SAUBLE	TRAVERSE	1942	LAKE	2,111	2 L	35.6		TRAVERSE	2,156	5	0	0	1	200			271	145,512
SAUBLE TWP., 19N-14W, SECTION 16																			
OF	SCOTTVILLE	TRAVERSE	1961	MASON	1,646	3 L	34.6		CINCINNATIAN	5,129	17	0	0	3	340				CUMULATIVE PRODUCTION COMBINED WITH REED CITY
OF	REED CITY	1962			2,319	3 L	37.2					11	0	0	2	220		2,229	527,644
AMBER TWP., 18N-17W, SECTIONS 13, 14, 23																			
AGF	SEARS	MICHIGAN STRAY	1964	OSCEOLA	1,492	12 S			DUNDEE	3,988	1	ABANDONED 1965	160						
SYLVAN TWP., 18N-7W, SECTION 32																			
AGF	SECORD	DUNDEE	1937	GLADWIN	3,437	5 L	38.0		DUNDEE	3,500	2	ABANDONED 1941	20					12,024	601
SECORD TWP., 19N-1E, SECTIONS 11, 12																			
GS	SHAVER (SUMNER- NEW HAVEN)	REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																	
AGF	SHELBY	TRAVERSE	1951	OCEANA	1,743	3 L	43.0		DUNDEE	2,234	20	ABANDONED 1971	350					228,092	652
BENONA TWP., 14N-18W, SECTION 18 BENONA TWP., 1																			

POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL		GF ACTIVE GAS FIELD OR POOL		G-C GAS-CONDENSATE FIELD OR POOL		GS GAS STORAGE RESERVOIR												
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP	PAY ZONE	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS	OIL PRODUCTION - BBLs	GAS PRODUCTION - Mcf	RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS BRINE PER DAY									
				DEPTH IN FEET	THICKNESS AND LITHOLOGY	OIL GRAVITY A.P.I.	TO END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979									
OF	SUMNER	1953	GRATIOT	2,853	1 L	44.5	DUNDEE	3,366	35	0	0	17	350	9,002	1,125,638		2,216	680		
SUMNER TWP., 11N-4W, SECTIONS 11, 12																				
GF	SURREY	1945	MICHIGAN STRAY	1,460	3 S		DUNDEE	4,000	?	0	0	2	320				12,920	DOMESTIC USE		
SURREY TWP., 17N-5W, SECTIONS 23, 24																				
GS	SWAN CREEK	REFER TO TABLE 4 DEVELOPED GAS STORAGE RESERVOIRS																		
AGF	SYLVAN	1941	MICHIGAN STRAY	1,525	10 S		DETROIT RIVER	4,100	1	ABANDONED 1953	40						82,328			
OF	DUNDEE	1948		3,925	13.7 D	48.0		11	0	0	2	440	3,094	1,203,920			2,736	200		
SYLVAN TWP., 18N-7W, SECTION 7 (MICHIGAN STRAY) SECTIONS 8, 9, 16 (DUNDEE)																				
GF	TAYMOUTH	1957	TRAVERSE	2,085	6 L		TRAVERSE	2,135	1	0	0	1	160		318				2	
TAYMOUTH TWP., 10N-5E, SECTION 11																				
AOE	TEKONSHA	1959	TRENTON	3,553	? DL	34.5	PRAIRIE DU CHIEN	4,147	4	ABANDONED 1976	90		19,309						215	
TEKONSHA TWP., 4S-6W, SECTION 17																				
AOE	THOMPSON CORNERS	1968	NEWAYGO	2,138	2 L		TRAVERSE	2,140	1	ABANDONED 1973	40			9,374					234	
BEAVER TWP., 15N-14W, SECTION 30																				
AOE	THORNAPPLE, SEC. 4	1952	BARRY	1,951	2 L		TRAVERSE	1,973	2	ABANDONED 1961	20			2,716					136	
THORNAPPLE TWP., 4N-10W, SECTIONS 3, 4																				
AOE	TRENT	1949	MUSKEGON	2,039	1 L		TRAVERSE	2,118	2	ABANDONED 1969	40			30,771					769	
CASNOVIA TWP., 10N-13W, SECTION 19																				
OF	TROWBRIDGE	1937	ALLEGAN	1,358	2 L	41.2	CINCINNATIAN	2,952	162	0	0	4	1,840	711	526,654			286	19	
TROWBRIDGE TWP., 1N-13W, SECTIONS 1, 3 THROUGH 10, 12, 13, 15 THROUGH 23, 27, 28, 29, 30, 31, 32																				
GF	TURK LAKE	1947	MONTCALM	1,081	4 S		DETROIT RIVER	3,413	4	0	0	1	640				221,936	DOMESTIC USE		
MONTCALM TWP., 10N-8W, SECTIONS 9, 10, 14																				
AOE	TYRONE	1952	KENT	2,379	2 L		DETROIT RIVER	2,900	7	ABANDONED 1956	140			31,558					225	
TYRONE TWP., 10N-12W, SECTIONS 10, 11, 14																				
AOE	UNION	1950	ISABELLA	3,191	2 L		DETROIT RIVER	4,096	1	ABANDONED 1963	20			58,263			55,053	2,913		
UNION TWP., 14N-4W, SECTION 20																				
GF	UNION, SEC. 6	1965	MICHIGAN STRAY	1,382	3 S		DUNDEE	3,777	2	0	0	2	320		14,417		14,417			
UNION TWP., 14N-4W, SECTION 6																				
GF	VERNON	1930	ISABELLA	3,755	3 DL	38.6	BOIS BLANC	5,118	78	0	0	1	890	1,752	5,053,798			5,678	140	
VERNON TWP., 16N-4W, SECTIONS 15, 16, 21, 22, 23, 26, 27																				
AGF	VERNON	1939	MICHIGAN STRAY	1,300	2 S		DETROIT RIVER	3,907	25	ABANDONED 1956	920					1,493,534				
VERNON TWP., 16N-4W, SECTIONS 25, 26, 35, 36																				
GF	VEVAY 8-2N-1W	1975	NIAGARAN REEF	4,140	44 D	43.0	NIAGARAN	4,312	1	ABANDONED 1976	80									
VEVAY TWP., 2N-1W, SECTION 8																				
OF	VEVAY 16-2N-1W (MASON)	1970	NIAGARAN REEF	4,165	39 D	49.4	CLINTON	4,555	2	0	0	2	120	14,000	202,973	193,078	929,343	1,691		
VEVAY TWP., 2N-1W, SECTION 16																				
OF	VEVAY 17-2N-1W	1972	NIAGARAN REEF	4,162	12 D		NIAGARAN	4,200	3	0	0	3	240	29,051	225,406	66,715	571,855	939	4	
VEVAY TWP., 2N-1W, SECTION 17																				
AOE	VEVAY 19-2N-1W	1971	INGHAM	2,141	65 L	37	CINCINNATIAN	4,600	2	ABANDONED 1972	80			12,930					162	
GF	NIAGARAN POOL A	1973		3,942	24 D	46.8			2	0	1	320	2,929	204,939	11,342	2,774,370	640	31		
GF	NIAGARAN POOL B								4	0	0	4	640	34,225	322,001	635,228	4,574,490	503		
GF	NIAGARAN POOL C								1	0	0	1	160	11,993	61,645	114,845	520,817	385		
FIELD DECLARED TO HAVE 3 SEPARATE RESERVOIRS OR POOLS (ORDER NO. 2-1-73)																				
POOL (A) INCLUDES THE F. MILLER & A. INLAY WELLS LOCATED IN THE SW 1/4 OF SECTION 24, T22N, R. 2E, S. 2E, 6. THE SW 1/4 OF SECTION 19, T. 2N, R. 1W. IN THE SW 1/4 OF SECTION 19, T. 2N, R. 1W. IN THE SW 1/4 OF SECTION 19, T. 2N, R. 1W.																				
POOL (B) INCLUDES THE CARTER, LYON, DART, & KRANZ WELLS LOCATED IN THE SW 1/4 OF SECTION 19, T. 2N, R. 1W.																				
POOL (C) INCLUDES THE LOVETTE WELL LOCATED IN THE SW 1/4 OF SECTION 19, T. 2N, R. 1W.																				
AOE	VEVAY 20-2N-1W	1972	INGHAM	3,939	2 D		PRAIRIE DU CHIEN	5,985	1	ABANDONED 1976	80			17,013			126,542	213		
VEVAY TWP., 2N-1W, SECTION 20																				
AOE	VICTORY, SEC. 10	1957	MASON	1,603	9 L	36.0	TRAVERSE	1,616	1	ABANDONED 1958	10			580					58	
VICTORY TWP., 19N-17W, SECTION 10																				
NONCOMMERCIAL GAS PRODUCTION IN BASE OF GLACIAL DRIFT																				
OF	VOGEL CENTER	1966	MISSAUKEE	3,892	3 L		DUNDEE	3,895	2	0	0	1	80	1,262	48,699			609	250	
CLAM UNION TWP., 21N-6W, SECTION 32																				
GF	WALES 16-6N-15E	1976	SALINA-NIAGARAN REEF	3,264	195.5 D		SALINA-NIAGARAN	3,650	3	1	0	3	120	132	132	245,000	245,000		2	
WALES TWP., 6N-15E, SECTION 16																				
OF	WALKER	1940	KENT-OTTAWA	1,121	21 SL		ST. PETER SS.	5,222					220	597	49,604				225	
OF	TRAVERSE	1938		1,872	8 L	36.0			783	1	0	340	8,560	84,724	17,335,886		3,658,751	2,205	276	
THE 340 WELLS INCLUDE 336 TRAVERSE AND 4 "BEREA"																				
OF	DETROIT RIVER	1957		2,132	12 D				1	0	0	1	10							
PRODUCTION COMBINED WITH TRAVERSE																				
GF	"BEREA" TRAVERS & DETROIT RIVER								14	0	0	5				1,348,473			DOMESTIC USE & LEASE FUEL	
WALKER TWP., 7N-12W, SECTIONS 19, 20, 27, 28, 29, 30, 31, 32, 33, 34																				
WYOMING TWP., 6N-12W, SECTIONS 2, 3, 4, 7, 8																				
TALLMADGE TWP., 7N-13W, SECTIONS 14, 15, 22 THROUGH 28, 33, 34, 35, 36																				
GEORGETOWN TWP., 6N-13W, SECTIONS 1, 2																				
GF	WASHINGTON, SEC. 10	1974	MACOMB	3,304	179 D		NIAGARAN	3,635	12	1	0	12	600		804,456	1,306,312				
GF	WASHINGTON, SEC. 10 POOL A	1976	MACOMB	3,352	234 D		SALINA-NIAGARAN	3,722	5	0	0	5	240		469,149	597,945				
WASHINGTON TWP., 4N-12E, SECTION 10																				
GF	WASHINGTON, SEC. 11	1965	NIAGARAN REEF	3,290	180 D		CLINTON	3,686	1	0	0	1	40		31,831	5,454,105				
WASHINGTON TWP., 4N-12E, SECTION 11																				
OF	WASHINGTON, SEC. 28	1975	SALINA A-1 CARBONATE	3,357	18 D		NIAGARAN	3,546	9	0	0	9	320	671	11,810	376,177	494,696		37	
WASHINGTON TWP., 4N-1E, SECTIONS 22, 28																				
OF	WAYLAND	1944	ALLEGAN	1,799	6 L	36.0	TRENTON-BLK. RIVER	4,400	54	0	0	2	530	731	267,955			506	1	
OF	SALINA	1960		3,132	12 D	28.0		34	3	0	33	1,680	79,638	1,612,776				960	5	
WAYLAND TWP., 3N-11W, SECTIONS 8, 9, 16, 17, 18, 20, 21																				
OF	WAYLAND, NORTH	1957	ALLEGAN	1,696	7 L		TRAVERSE	1,712	15	0	0	5	150	894	115,080				767	55
WAYLAND TWP., 3N-11W, SECTIONS 6, 7, NW 1/4 8																				

POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL		GF ACTIVE GAS FIELD OR POOL		G-C GAS-CONDENSATE FIELD OR POOL		GS GAS STORAGE RESERVOIR												
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP	PAY ZONE	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS	OIL PRODUCTION - BBLs	GAS PRODUCTION - Mcf	RECOVERY PER ACRE DRILLED (BBLs)	TOTAL BARRELS BRINE PER DAY									
				DEPTH IN FEET	THICKNESS AND LITHOLOGY	OIL GRAVITY A.P.I.	TO END	PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979									
AOE	WEARE	1961	OCEANA	1,674	1 L	41.4	DUNDEE	2,217	1	ABANDONED 1954	10			1,096					110	
WEARE TWP., 16N-17W, SECTIONS 12, 13																				
AOE	WEARE, SEC. 14	1952	OCEANA	1,674	1 L	41.4	DUNDEE	2,217	1	ABANDONED 1954	10			1,096					110	
WEARE TWP., 16N-17W, SECTION 14																				
OF	WEST BRANCH	1933	OGEWAW	1,796	2 L		EMBRON-ORDOVICIAN	11,012												
PRODUCTION COMBINED WITH WEST BRANCH DUNDEE																				
OF	DUNDEE	1933		2,650	20 L	36.8		320	7	0	188	3,040	332,479	10,381,963					3,415	2,800
OF	DETROIT RIVER S2	1951		3,585	9 D	38.9														
THE 188 WELLS INCLUDE 186 DUNDEE AND 1 TRAVERSE AND 1 TRAVERSE & DUNDEE																				
OF	RICHFIELD	1952		4,127		33.0		63	0	0	60	2,520	58,673	3,339,086			2,867	70,965	1,325	2
THE 60 WELLS INCLUDE 29 RICHFIELD, 25 SOUR ZONE, AND 6 RICHFIELD & SOUR ZONE																				
WEST BRANCH TWP., 22N-2E, SECTIONS 18, 19, 20, 21, 26, 27, 28, 29, 34, 35, 36																				
CHURCHILL TWP., 22N-3E, SECTION 31																				
HORTON TWP., 21N-2E, SECTIONS 1, 2																				
MILLS TWP., 21N-3E, SECTIONS 5, 6																				
GF	WHEATLAND	1947	MICHIGAN STRAY	1,399	3 S		DETROIT RIVER	3,849	4	0	0	1	160					516,496	DOMESTIC USE	
AOE	DUNDEE	1945		3,690	2 L	43.0								141,631					1,416	
WHEATLAND TWP., 14N-7W, SECTIONS 7, 8, 9																				
AOE	WHITE CLOUD	1963	NEWAYGO	2,537	1 L		TRAVERSE	2,540	1	ABANDONED 1964	40			1,295					32	
WILCOX TWP., 14N-12W, SECTION 19																				
OF	WHITE OAK 29-2N-2E	1974	SALINA-NIAGARAN REEF	4,066	19 D		NIAGARAN	4,583	2	0	0	2	160		5,884	54,801			343	112
WHITE OAK TWP., 2N-2E, SECTION 29																				
OF	WHITE OAK 32-2N-2E	1973	SALINA-NIAGARAN REEF	3,970	8 D		CATARACT	4,583	2	0	0	2	160		2,864	66,072	1,487	17,376	413	174
OF	WHITE OAK 32-2N-2E POOL A	1977	NIAGARAN REEF	4,046	6 D			4,278	1	0	0	1	80		1,502	12,272			153	
WHITE OAK TWP., 2N-2E, SECTIONS 31, 32																				
WHITE OAK 29-2N-2E, WHITE OAK 32-2N-2E AND WHITE OAK 32-2N-2E POOL A MADE SEPARATE FIELDS IN 1978 DUE TO AROGATION OF PREVIOUS SPACING ORDER																				
AOE	WHITE RIVER	1950	MUSKEGON	2,053	2 L	28.0	DUNDEE	2,055	1	ABANDONED 1951	20			7,061					353	
WHITE RIVER TWP., 12N-18W, SECTION 15																				
OF	WILEY	1962	MASON	1,663	5 L	39.9	ST. PETER SS.	5,890	18	0	0	4	380		226	426,334			1,122	
EDEN TWP., 17N-																				

TABLE 4 GAS STORAGE RESERVOIRS

POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL		GF ACTIVE GAS FIELD OR POOL		G-C GAS-CONDENSATE FIELD OR POOL		GS GAS STORAGE RESERVOIR												
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP PRODUCING SECTIONS	PAY ZONE DEPTH IN FEET	THICKNESS AND LITHOLOGY	OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS TO COMPLETION	ABANDONED IN 1979	ACTIVE IN 1979	DRILLED ACRES	OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		YEAR MADE STORAGE FIELD	STORAGE CAPACITY (Bcf)		
													PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979				
GS AUSTIN	MICHIGAN STRAY	1935	MECOSTA	1,380	14 S		DETROIT RIVER	4,043	115	0	0	107	3,970					1941	13	
GS BELLE RIVER MILLS	SALINA-NIAGARAN	1961	ST. CLAIR	2,215	305 D		CLINTON	2,694	28	0	0	27	840		1,212			1965	44	
GS CAPAC	NIAGARAN REEF	1962	ST. CLAIR	4,505	6 D		MT. SIMON SS.	6,237	98	23	0	98	9,120		5,983			1970	30	
GS CLARENCE 19-15-4W	NIAGARAN REEF	1971	CALHOUN	3,154	24 D		NIAGARAN	3,240	1	0	0	1	160					1975	1	
GS COLDWATER	MICHIGAN STRAY	1945	ISABELLA	1,390	10 S		SYLVANIA	5,090	78	0	0	73	2,400					1956	8	
GS COLUMBUS	SALINA-NIAGARAN	1964	ST. CLAIR	2,738	190 D		CLINTON	3,232	20	0	0	18	320					1972	18	
GS COLUMBUS, WEST	SALINA-NIAGARAN REEF	1967	ST. CLAIR	3,183	14+ D		CLINTON	3,447	29	0	0	23	520					1973	20	
GS CRANBERRY LAKE	MICHIGAN STRAY	1943	CLARE-MISSAUKEE	1,321	10 S		RICHFIELD	5,201	171	0	0	149	7,000					1947	13	
GS CROTON	MARSHALL	1951	NEWAYGO	917	4 S		SALINA	3,993	63	0	0	53	860					1957	4	
GS FOUR CORNERS	SALINA-NIAGARAN	1966	ST. CLAIR	2,205	212 D		CLINTON	2,638	5	0	0	2	80					1972	1,4	
GS FREEMAN-LINCOLN	MICHIGAN STRAY	1938	CLARE	1,500	10 S		DETROIT RIVER	3,957	175	0	0	147	6,600					1950	21	
GS GOODWELL	MICHIGAN STRAY	1943	NEWAYGO	1,142	20 S		DETROIT RIVER	3,562	98	0	0	87	3,020					1948	19	
GS HAMILTON, NORTH	MICHIGAN STRAY-MARSHALL	1952	CLARE	1,487	8 S		RICHFIELD	5,395	66	0	0	54	3,040					1960	8	
GS HESSEN	NIAGARAN REEF	1965	ST. CLAIR	2,499	261 D		NIAGARAN	2,887	21	0	0	12	640	2,480	119,972	55,878	11,803,082	1976	13.6	
GS HOWELL	SALINA-NIAGARAN	1935	LIVINGSTON	3,920	9 D		ST. PETER SS.	5,958	71	0	0	69	2,400					1962	20	
GS IRA	SALINA-NIAGARAN	1953	ST. CLAIR	2,276	33 D		CLINTON	2,632	15	0	0	10	680					1961	4	
GS LACEY STATION	A-2 SALT SOLUTION CAVERN	1971	BARRY				CAMBRIAN		2	0	0	2						1975	-2	
GS LEE 4-15-5W	SALINA-NIAGARAN REEF	1972	CALHOUN	3,162	86 D		NIAGARAN	3,415	2	0	0	2	320		178			1976	-	
GS LEE 16	SALINA-NIAGARAN		CALHOUN	3,200					1	0	0	1	300					1975	1	
GS LENOX	SALINA-NIAGARAN	1960	MACOMB	2,734	46 D		CLINTON	3,018	14	0	0	6	300		2,565			1965	1.5	
GS MARION (WINTERFIELD)	MICHIGAN STRAY	1940	CLARE-OSCEOLA	1,344	15 S		SYLVANIA	5,100	0	0	0	284	10,720					1947	33.2	
GS MARYSVILLE-MORTON	SEE FOOTNOTE FOR GAS STORAGE FIELDS ON NEXT PAGE																			
GS MUTTONVILLE	SALINA-NIAGARAN REEF	1966	MACOMB	2,576	194 D		CLINTON	3,039	18	0	0	16	280					1975	14	
GS NORTHVILLE	TRENTON-BLK. RIVER	1954	WAYNE-WASHTENAW	4,395	70 D		CAMBRO-ORDOVICIAN	5,850	78	0	0	47	2,825+					1968	11.8	
GS ORIENT	MICHIGAN STRAY	1945	OSCEOLA-CLARE	1,508	11 S		SYLVANIA	5,207	76	0	0	67	2,600					1951	6	
GS OVERISEL	SALINA	1956	ALLEGAN	2,650	12 D		TRENTON	4,060	194	0	0	160	6,660					1960	24	
GS PARTELLO	SALINA A-1 CARR	1959	CALHOUN	3,192	30 D		TRENTON-BLK. RIVER	4,905	5	0	0	4	200					1971	2	
GS PUTTYGUT	SALINA-NIAGARAN	1960	ST. CLAIR	2,423	60 D		NIAGARAN	2,774	26	0	0	23	440	OIL PRODUCTION COMBINED WITH ADAIR				11,485,690	1971	11
GS RAY	SALINA-NIAGARAN	1961	MACOMB	2,945	101 D		NIAGARAN	3,273	49	0	0	39	560		1,689			35,907,293	1966	46
GS REED CITY	MICHIGAN STRAY	1940	OSCEOLA-LAKE	1,217	12 S		ST. PETER SS.	8,960	102	0	0	92	4,880					7,795,091	1947	18
GS RIVERSIDE	MICHIGAN STRAY	1940	MISSAUKEE	1,435	7 S		DUNDEE	3,953	99	0	0	79	3,680					5,292,251	1962	2.3
GS SALEM	SALINA	1937	ALLEGAN	2,725	2 D		TRENTON	3,792	64	0	0	62	4,960		2,973			11,536,912	1963	10
GS SHAYER (SUMNER-NEW HAVEN)	MICHIGAN STRAY	1935	GRATIOT-MONTCALM	1,020	11 S		DUNDEE	3,536	56	0	0	43	3,920					11,337,204	1958	12
GS SIX LAKES	MICHIGAN STRAY	1934	ISABELLA-MECOSTA	1,270	25 S		DETROIT RIVER	3,790	373	0	0	266	11,480					52,636,813	1953	54

POOL CLASSIFICATION		OF ACTIVE OIL FIELD OR POOL		GF ACTIVE GAS FIELD OR POOL		G-C GAS-CONDENSATE FIELD OR POOL		GS GAS STORAGE RESERVOIR													
FIELD NAME	PRODUCING FORMATION OR POOL	YEAR OF DISC.	COUNTY TOWNSHIP PRODUCING SECTIONS	PAY ZONE DEPTH IN FEET	THICKNESS AND LITHOLOGY	OIL GRAVITY A.P.I.	DEEPEST FORMATION OR POOL TESTED	DEPTH IN FEET	NUMBER OF WELLS TO COMPLETION	ABANDONED IN 1979	ACTIVE IN 1979	DRILLED ACRES	OIL PRODUCTION - BBLs		GAS PRODUCTION - Mcf		YEAR MADE STORAGE FIELD	STORAGE CAPACITY (Bcf)			
													PRODUCED IN 1979	CUMULATIVE THROUGH 1979	PRODUCED IN 1979	CUMULATIVE THROUGH 1979					
GS SWAN CREEK	SALINA-NIAGARAN	1967	ST. CLAIR	2,256	245 D		CLINTON	2,638	1	0	0	1	40					417,539	1972	1.4	
GS WINFIELD	MICHIGAN STRAY	1935	MONTCALM	1,125	8 S		DETROIT RIVER	3,405	133	2	0	86	3,240					4,932,855	1950	12	
GS WOODVILLE (NORWICH)	MICHIGAN STRAY	1943	NEWAYGO	1,185	13 S		DETROIT RIVER	3,405	53	0	0	39	2,240					2,736,924	1951	5	
TOTALS:													92,275	2,480	132,007	55,878	367,497,328				

WELL COUNTS IN THESE COLUMNS ARE AS PROVIDED BY FIELD OFFICE PERSONNEL

LACEY STATION. THIS IS A DRY-GAS STORAGE PROJECT FOR THE BATTLE CREEK GAS COMPANY. GAS IS STORED IN A CAVITY WASHED FROM SALINA A-2 SALT BEDS AT A DEPTH OF ABOUT 3100 FEET BELOW THE SURFACE.

THE PRODUCING SECTIONS LISTED IN GAS STORAGE RESERVOIR TABLES DO NOT NECESSARILY RELATE TO CURRENT GAS STORAGE AREA OR BOUNDARIES. ALSO, THE SECTIONS DO NOT NECESSARILY RELATE TO POTENTIAL OR FUTURE GAS STORAGE AREA OR BOUNDARIES. THE SECTIONS, OR PARTS OF SECTIONS LISTED ARE THOSE WHICH CONTAINED AT LEAST ONE PRODUCIBLE OIL OR GAS WELL, ASSIGNED TO THE FIELD OR POOL PRIOR TO CONVERSION OR DESIGNATION AS GAS STORAGE.

MARYSVILLE-MORTON: THIS STORAGE OPERATION, OPERATED BY SOUTHEASTERN MICHIGAN GAS COMPANY, UTILIZES WELLS PREVIOUSLY USED IN SALT SOLUTION-EXTRACTION OPERATIONS. THE OPERATION IS SO NAMED TO DISTINGUISH IT FROM THE MARYSVILLE SYNTHETIC GAS MANUFACTURING FACILITIES.

MARYSVILLE: THIS IS AN UNDERGROUND STORAGE PROJECT FOR LPG'S USED IN THE MANUFACTURE OF SYNTHETIC NATURAL GAS. LPG STORAGE IS IN MAN-MADE CAVERNS IN SALINA SALT BEDS PROJECT AREA IS IN SECTION 7, T.5N., R.17E.

MOST GAS STORAGE RESERVOIRS WERE ORIGINALLY CLASSIFIED AS GAS FIELDS OR POOLS. UPON DEPLETION OR NEAR DEPLETION OF NATIVE GAS, THEY WERE CONVERTED TO STORAGE RESERVOIRS.

GAS STORAGE RESERVOIR OPERATORS

- |  |  |
|--|--|
| BATTLE CREEK GAS COMPANY<br>LACEY STATION  | REED CITY<br>SIX LAKES<br>SHAYER (SUMNER-NEW HAVEN)<br>WOODVILLE                               |
| CONSUMERS POWER COMPANY<br>FOUR CORNERS<br>HESSEN<br>IRA<br>LENOX<br>NORTHVILLE<br>OVERISEL<br>PUTTYGUT<br>RAY<br>SALEM<br>SWAN CREEK                      | MICHIGAN GAS STORAGE COMPANY<br>CRANBERRY LAKE<br>MARION<br>RIVERSIDE                          |
| MGU DEVELOPMENT COMPANY<br>CLARENCE 19-15-4W   | MICHIGAN-WISCONSIN PIPELINE COMPANY<br>CAPAC<br>COLDWATER<br>CROTON<br>MUTTONVILLE<br>WINFIELD |
| MICHIGAN CONSOLIDATED GAS COMPANY<br>AUSTIN<br>BELLE RIVER MILLS<br>COLUMBUS<br>COLUMBUS, WEST<br>FREEMAN-LINCOLN<br>GOODWELL<br>HAMILTON, NORTH<br>ORIENT | PANHANDLE EASTERN PIPELINE<br>HOWELL<br>SOUTHEASTERN MICHIGAN GAS COMPANY<br>MARYSVILLE-MORTON |

# PRESSURE MAINTENANCE AND SECONDARY RECOVERY OPERATIONS

TABLE 5

FIELD AND COUNTY	OPERATOR TYPE OF PROJECT	DISC. YEAR PROJECT BEGAN	PAY ZONE		TOTAL UNIT ACRES	INJECTION FLUIDS		VOLUME OF INJECTED FLUID 1979		CUMULATIVE VOLUME OF INJECTED FLUID		UNIT PRODUCTION IN 1979				UNIT CUMULATIVE 1-1-80			
			FORM.	THICK.		DEPTH	PRESSURE PSIG	MCF GAS	BARRELS WATER	BARRELS WATER	MCF GAS	BARRELS OIL	SALES MCF GAS	WATER PRODUCED	NO. WELLS	BARRELS OIL	SALES MCF GAS	BARRELS WATER	
WURLEIUS 35 UNIT INDIANAY CO.	(1)UWF	1971	NIAG.	110	4075	BRINE 1005	NONE	NONE	3,811,049	(P) 96,610 (S) 96,610	60,990	371,000	5	(P) 805,000 (S) 886,596	908,218	1,396,790			
BEAVER CREEK GRAMFORD-KALKASKA CO.	(2)UWF	1947 1963	RICH.	17	4400	FRESH WATER 2250	NONE	NONE	80,349,660	(P) 545,345 (S) 545,345	242,427	596,421	55	(P) 7,750,000 (S) 5,234,933	19,781,550	5,530,999			
BEAVERTON, WEST GLADWIN CO.	(3)UWF	1943 1966	DO.	2	3876	FRESH WATER & BRINE, 2100	NONE	NONE	870,770	(P) NONE (S) 5,581	NONE	18,250	5	(P) 180,000 (S) 180,000	NONE	105,670			
BENTLEY DUNDEE GLADWIN CO.	(4)UWF	1937 1964	DO.	13	3510	FRESH WATER & BRINE, 2352	NONE	NONE	1,620,851	(P) NONE (S) 121,905	NONE	37,595	2	(P) 349,178 (S) 27,536	NONE	123,006			
BERLIN ST. CLAIR CO.	(12)UWF	1960 1970	NIAG.	30	3800	BRINE VACUUM	NONE	NONE	12,502	(P) 73,800 (S) 73,800	63,052	40,000	1	(P) 950,945 (S) 124,233	357,412	217,400			
BLUE LAKE 1-28N-5W KALKASKA CO.	(13)UWF	1971 1979	NIAG.	18	6481	FRESH WATER & BRINE, VACUUM	NONE	NONE	10,907	(P) 39,757 (S) 39,757	155,614	NONE	1	(P) 465,804 (S) 465,804	679,623	NONE			
CHARLTON 9 UNIT OTSEGO CO.	(11)UWF	1972 1979	NIAG.	134	5832	FRESH WATER VACUUM	NONE	NONE	6,610,877	(P) 787,199 (S) 40,000	656,138	592,395	11	(P) 6,450,053 (S) 40,000	4,784,445	773,772			
CHESTER 18 UNIT OTSEGO CO.	(11)UWF	1971 1978	NIAG.	20	6330	FRESH WATER VACUUM	NONE	NONE	2,510,755	(P) NONE (S) 378,513	NONE	27,010	19	(P) 3,275,000 (S) 1,624,830	NONE	335,880			
COLUMBUS 3 UNIT ST. CLAIR CO.	(5)URGGWF	1968 1974	NIAG.	49	3105	RECYCLE GAS & BRINE, 1100 8 VAC	DISCONT. 1961	DISCONT. 1962	644,759	(P) 375,706 (S) 375,706	465,759	344,925	74	(P) 5,800,000 (S) 5,784,759	10,895,209	2,981,974			
CRANBERRY LAKE CLARE CO.	(4)UWF	1951 1969	RICH.	15	5048	FRESH WATER 2700	NONE	NONE	3,719,447	(P) 11,000 (S) 11,000	NONE	85,775	7	(P) 1,139,737 (S) 295,712	NONE	739,490			
EAST NORMICK MISSAUKEE CO.	(5)URGGWF	1947 1947	RICH.	14	4880	FRESH WATER 2450	NONE	NONE	1,306,538	(P) 591,371 (S) 591,371	60,633	80,936	17	(P) 1,925,000 (S) 1,532,344	1,619,223	1,048,967			
ENTERTISE MISSAUKEE CO.	(5)URGGWF	1943 1953	RICH.	16	4405	FRESH WATER 2500	NONE	NONE	3,742,069	(P) NONE (S) 28,215	NONE	119,173	7	(P) 800,000 (S) 914,245	NONE	1,323,370			
GROUT GLADWIN CO.	(5)UWF	1956 1960	RICH.	10	5039	FRESH WATER 1546	NONE	NONE	19,310,647	(P) 115,638 (S) 115,638	51,635	565,385	26	(P) 2,800,000 (S) 3,767,492	4,212,350	6,249,026			
HAMILTON CLARE CO.	(5)UWF	1952 1958	RICH.	12	5145	FRESH WATER 2237	NONE	NONE	49,772	(P) 241,695 (S) 241,695	140,545	1,000	2	(P) 1,586,788 (S) NONE	882,943	1,750			
HAYES 15 OTSEGO CO.	(11)UWF	1973 1979	NIAG.	80	6350	FRESH WATER VACUUM	NONE	NONE	NONE	(P) 171,430 (S) 2,000	NONE	NONE	1	(P) 1,318,181 (S) NONE	1,965,893	NONE			
KALKASKA 21 POOL A KALKASKA CO.	(10)URG	1972 1979	NIAG.	192	6562	RECYCLE GAS 1750	DISCONT. 1961	DISCONT. 1962	319,919	(P) 34,086 (S) 30,000	40,770	NONE	1	(P) 794,176 (S) 33,619	1,298,641	NONE			
KALKASKA 21 POOL C KALKASKA CO.	(10)URG	1972 1977	NIAG.	130	6600	RECYCLE GAS 1850	DISCONT. 1961	DISCONT. 1962	340,841	(P) 70,188 (S) 70,188	65,799	NONE	1	(P) 1,308,000 (S) 110,798	1,876,049	NONE			
KALKASKA 21 POOL D KALKASKA CO.	(10)URG	1971 1976	NIAG.	170	5590	RECYCLE GAS 1700	DISCONT. 1961	DISCONT. 1962	319,224	(P) 121,619 (S) NONE	645,302	7,300	1	(P) 721,509 (S) NONE	5,891,791	12,410			
MANEELONA 34-29N-5W ANTRIM CO.	(13)URG	1974 1979	NIAG.	150	6449	RECYCLE GAS 1600	DISCONT. 1961	DISCONT. 1962	221,238	(P) 83,419 (S) 5,500	NONE	NONE	1	(P) 474,118 (S) 10,769	115,071	NONE			
MANISTEE 1 UNIT MANISTEE CO.	(11)URG	1973 1976	NIAG.	158	4440	RECYCLE GAS 1707	DISCONT. 1961	DISCONT. 1962	1,850,720	(P) 39,741 (S) 39,741	38,914	20,000	1	(P) 119,807 (S) 119,807	101,488	37,300			
MAYFIELD 10 POOL B GRAND TRAVERSE CO.	(11)UWF	1976 1979	NIAG.	82	6283	FRESH WATER 844	NONE	NONE	126,691	(P) 39,741 (S) 39,741	38,914	20,000	1	(P) 119,807 (S) 119,807	101,488	37,300			
ONONDAGA 10-IN-2W INGHAM CO.	(1)UWF	1971 1978	NIAG.	75	3784	BRINE 829	NONE	NONE	2,175,651	(P) 538,213 (S) 538,213	592,036	2,941,170	14	(P) 3,703,000 (S) 3,778,363	6,735,197	5,829,722			
ONONDAGA 21 UNIT "A" INGHAM CO.	(11)UWF	1971 1978	NIAG.	65	3629	BRINE 872	NONE	NONE	1,554,549	(P) 77,827 (S) 20,000	290,995	205,860	11	(P) 1,590,845 (S) 20,000	4,476,580	248,930			
ONONDAGA 21 UNIT "B" INGHAM CO.	(1)UWF	1971 1978	NIAG.	59	3688	BRINE 906	NONE	NONE	618,981	(P) 9,152 (S) 9,152	20,513	239,075	5	(P) 1,611,000 (S) 9,152	1,482,874	323,755			
PENNFIELD 35 UNIT CALHOUN CO.	(1)UWF	1974 1976	NIAG.	4	2820	BRINE 1200	NONE	NONE	5,340,445	(P) 115,336 (S) 76,800	50,573	828,915	12	(P) 1,405,005 (S) 291,800	364,735	1,622,243			
REED CITY <sup>26</sup> LAKE-OSCEOLA CO.	(8)GSGOR	1940 1963	DO., R.C.	21	3585	PRODUCED BRINE GAS STORAGE	DISCONT. 1959	DISCONT. 1959	40,000,000 ESTIMATE	(P) 147,243 (S) 147,243	GAS STORAGE	962,870	171	(P) 39,393,000 (S) 3,523,400	16,257,876	175,585,759			
ROSE CITY OSEMAW CO.	(9)UWF	1945 1964	RICH.	9	4125	FRESH WATER 2491	NONE	NONE	6,945,270	(P) 204,951 (S) 204,951	92,760	29,109	46	(P) 3,558,000 (S) 1,754,842	6,637,871	437,362			
ROSE CITY CENTRAL OSEMAW CO.	(9)UWF	1951 1971	RICH.	8	4125	FRESH WATER 2157	NONE	NONE	2,838,799	(P) 19,021 (S) 19,021	2,715	2,008	10	(P) 1,000,000 (S) 198,034	996,317	86,398			
ROSE CITY, WEST OSEMAW CO.	(5)UWF	1962 1968	RICH.	10	4150	FRESH WATER & BRINE, VACUUM	DISCONT. 1959	DISCONT. 1959	2,393,566	(P) 20,303 (S) 20,303	4,128	25,548	4	(P) 570,000 (S) 251,714	851,767	142,073			
ST. HELEN ROSCOMMON CO.	(5)URGGWF	1947 1958	RICH.	9	4480	FRESH WATER VACUUM	DISCONT. 1959	DISCONT. 1959	3,151,610	(P) 281,195 (S) 281,195	194,902	141,255	48	(P) 3,760,000 (S) 2,842,584	11,828,508	1,160,181			

THE HEADQUARTERS RICHFIELD WATERFLOOD PROJECT IS NOT LISTED BECAUSE THERE WAS NO WATER INJECTION DURING 1979.

SPRINGDALE 28 MANISTEE CO.	(11)UWF	1973	NIAG.	43	4719	80	NONE	106,453	1	NONE	100,456	86,421	2	(P) 447,000 (S) 14,192	239,112	NONE
WEST BRANCH OSEMAW CO.	(6)UWF	1933 1966	DO.	28	2650	2730	FRESH WATER & BRINE, 1500	NONE	1,233,794	60	52,525	NONE	73	(P) 3,531,877 (S) 1,115,109	NONE	4,543,822

\*ALL GAS SALES FROM FIELD CREDITED TO WATERFLOOD PROJECT

NUMBER OF ACTIVE PROJECTS . . . . . 32  
 AMOUNT OF GAS INJECTED IN 1979 . . . . . 2,536,593 MCF  
 AMOUNT OF WATER INJECTED IN 1979 . . . . . 27,094,932 BBL  
 NUMBER OF GAS INJECTION WELLS . . . . . 178  
 NUMBER OF WATER INJECTION WELLS . . . . . 371  
 TOTAL PRIMARY OIL PRODUCTION IN 1979 . . . . . 2,053,689 BBL  
 TOTAL SECONDARY OIL PRODUCTION IN 1979 . . . . . 3,450,704 BBL

OIL PRODUCTION IN EXCESS OF THAT EXPECTED THROUGH PRIMARY DEPLETION IN THE PRESSURE MAINTENANCE AND SECONDARY RECOVERY PROJECTS IS APPROXIMATELY 10% OF THE TOTAL MICHIGAN PRODUCTION FOR 1979.

TOTAL UNIT ACRES AND OTHER DATA DOES NOT NECESSARILY EQUAL ACREAGE LISTED IN TABLES 2 AND 3.

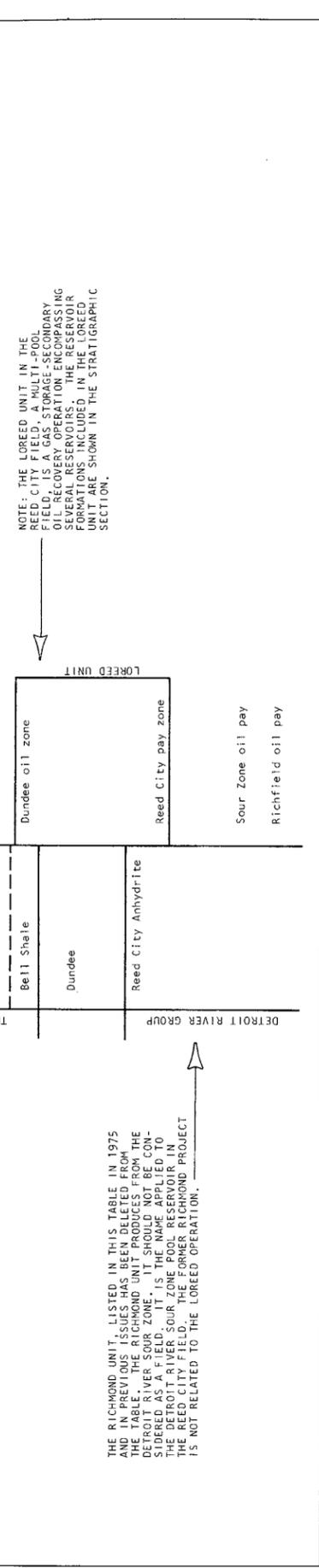
A. INCLUDES 0 MCF PURCHASED OUTSIDE KALKASKA 21 POOL A.  
 B. INCLUDES 125,198 MCF PURCHASED OUTSIDE KALKASKA 21 POOL C.  
 C. INCLUDES 134,532 MCF PURCHASED OUTSIDE KALKASKA 21 POOL D.  
 D. INCLUDES 305,134 MCF PURCHASED OUTSIDE MANISTEE 1 UNIT.

- OPERATOR
- MOBIL OIL CORPORATION
  - UNION OIL CORPORATION
  - H. E. TOPE, INC.
  - LEASE MANAGEMENT, INC.
  - AMCO PRODUCTION COMPANY
  - MARATHON OIL COMPANY
  - FARMERS PETROLEUM COOPERATIVE, INC.
  - MICHIGAN CONSOLIDATED GAS COMPANY
  - MUSKEGON DEVELOPMENT COMPANY
  - NORTHERN MICHIGAN EXPLORATION COMPANY
  - SEB OIL COMPANY
  - SEB OIL COMPANY
  - AMCO PRODUCTION COMPANY

FIGURES DEFINED AS (P) AND (S) RESPECTIVELY REPRESENT OIL PRODUCED AS A RESULT OF PRIMARY AND SECONDARY TECHNIQUES.

UNIT WATER FLOOD  
 UNIT RECYCLED GAS  
 & WATER FLOOD  
 & UNIT GAS STORAGE  
 IN OIL RESERVOIR

NOTE: THE LOREED UNIT IN THE REED CITY FIELD, A MULTI-POOL OIL RECOVERY OPERATION ENCOMPASSING THE REED CITY, CENTRAL AND ROSE CITY WEST, IS A GAS STORAGE-SECONDARY OIL RECOVERY OPERATION ENCOMPASSING THE REED CITY, CENTRAL AND ROSE CITY WEST. IT IS THE NAME APPLIED TO THE DETROIT RIVER SOUR ZONE POOL RESERVOIR IN THE REED CITY FIELD. THE FORMER RICHMOND PROJECT IS NOT RELATED TO THE LOREED OPERATION.



\*LOREED UNIT IN REED CITY FIELD

TABLE 6 GAS PLANT OPERATIONS BY PLANT OR FIELD, 1979 (All figures in Mcf)

Plant or Field	Input Totals	Plant Fuel	Lease Fuel	Recycled	Line Loss	Vented	Extraction Loss	Sales to Pipe Line	L.P.G. Recovery Gallons
Albion-Scipio	6,345,676	742,900	0	0	550,619	91,000	653,203	4,304,954	19,594,601
Aurelius	5,813,603	345,554	0	0	221,802	11,163	379,087	4,855,997	12,145,892
Beaver Creek	388,725	14,783	150,256	0	0	0	24,806	198,880	82,800
Chester	992,262	144,585	0	0	0	0	43,682	810,995	1,692,261
Columbus, Sec. 3	830,979	72,200	29,496	633,910	14,572	0	80,801	0	2,309,113
Convis	190,183	25,566	0	0	8,961	3,467	16,032	136,157	189,049
*Hamilton	102,036	11,973	43,440	0	0	0	0	46,623	0
Kalkaska (Amoco)	38,463,451	641,086	0	0	258,134	1,494	1,767,895	35,794,842	63,043,907 <sup>(1)</sup>
Kalkaska (Shell)	96,485,432	2,429,779	0	0	849,907	0	13,300,225	79,905,521	375,797,058 <sup>(1)</sup>
Leonard	1,751,350	188,614	706	0	0	83,906	42,930	1,435,194	1,340,422
Loreed	9,705,267	277,847	0	9,381,205	0	0	96,215	0	2,899,263
Totals	161,068,964	4,894,887	223,898	10,015,115	1,903,995	191,030	16,405,176	127,489,163	479,094,366

\*Receives and processes oil well gas only.

(1) These LPG figures include stabilized condensate.

NOTE: The above table is the record of plants which are serving oil field operations, or which are extracting natural gas liquids from designated dry gas fields.

All data from Production and Proration Unit records.

MICHIGAN OIL REFINERIES

COMPANY	REFINERY LOCATION	NOMINAL CAPACITY BBLs./DAY
Bay Refining, Division of Dow Chemical Co.	Bay City	17,000
Crystal Refining Co.	Carson City	6,200
Lakeside Refining Co.	Kalamazoo	5,600
Total Petroleum, Inc.	Alma	42,000
Marathon Oil Co.	Detroit	68,500
Osceola Refining Co.	West Branch	12,500
Total Refinery Capacity		151,800

AVERAGE DAILY AMOUNT OF CRUDE REFINED (Bbls. - ALL REFINERIES)

Michigan produced crude	76,768
Out-of-State produced crude	54,162
	130,930

PART 3  
CUMULATIVE RECORDS  
EXPLANATION

PART 3 contains cumulative statistics principally of oil and gas production, well completions, and oil field brine production and disposal from 1925 through the most recent year-end compilations.

OIL AND GAS PRODUCTION TABLES. Oil and gas production figures for individual years prior to 1960 can be found in issues of "Summary of Operations, Oil and Gas Fields" for 1962 and prior years, and in "Michigan's Oil and Gas Fields" 1963 to present. The tables show the year of the first recorded production from a particular formation, and the yearly and cumulative production totals from 1925 through the most recent year-end compilations. Cumulative oil and gas production by county is shown on a separate table. Refer to Part 1 for county production figures for the past year, and prior issues for previous years.

CUMULATIVE WELL COMPLETIONS. These tables show the cumulative number of yearly completions in a county. Well density figures include field development wells, exploratory wells, and service wells of all types.

DRILLING PERMITS, WELL COMPLETIONS, FIELDS DISCOVERED. These tables show the number of drilling permits issued by year from 1927 through the most recent year-end compilations. Initial classification of well completions by year, the number of new fields or pools discovered, and the number of producible oil or gas wells on a yearly basis are all shown on the same table.

BRINE PRODUCTION AND DISPOSAL. Oil field brine production records other than for individual fields were discontinued in 1968. These tables listed the reported amount of produced brine and the method of disposal from 1937 up to 1967. Most oil field brine is still returned to subsurface formations. Small quantities are used for dust control or ice and snow removal on county roads in local areas. A small amount of brine is also disposed of in burning pits.

SERVICE WELLS. Service wells as listed in this publication are those wells which were drilled to serve some purpose other than the initial production of oil or gas. Oil or gas wells are sometimes converted to salt water disposal, observation, or facility wells in gas storage or pressure maintenance projects. There are several types of service wells:

*LPG Wells.* These are wells drilled for underground storage of liquified petroleum gas. In Michigan, these storage reservoirs are in man-made cavities in salt beds. The cavities have been made by dissolving the salt with water and then pumping out the brine.

*Gas Storage Wells.* These are wells drilled in gas storage reservoirs. They are frequently referred to as facility wells, and are generally used to inject gas into or extract gas from the reservoir. Certain facility wells may sometime in the history of the field be used as salt water disposal wells or observation wells.

*Observation Wells.* Most observation wells are related to gas storage projects. They are used to observe underground movement of gas, brines and other fluids, or to observe pressures.

*Brine Disposal Wells.* These wells are used in the disposal of oil and gas field brines back into some suitable subsurface formation. Brine disposal well permits are issued for these wells.

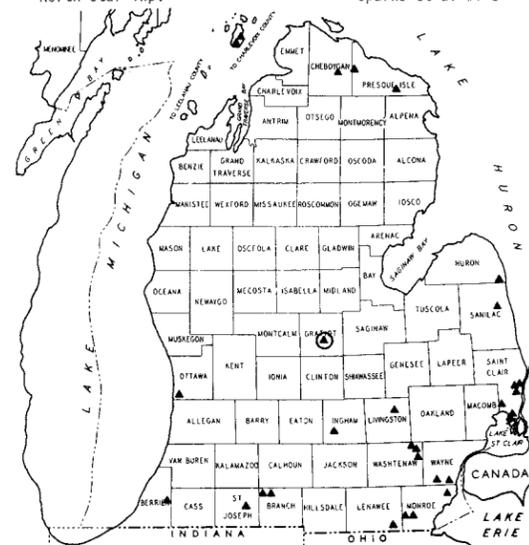
*Injection and Pressure Maintenance Wells.* These are wells used in secondary recovery, or pressure maintenance projects. They may be new wells drilled specifically for injection or pressure maintenance, or they may be converted oil or gas wells; their status can change from time to time.

Oil or gas wells are sometimes converted to salt water disposal, observation, facility wells in gas storage reservoirs, or water injection wells used in secondary recovery or pressure maintenance projects. The types of service wells listed under "Classification of Well Completions" do not include oil or gas wells converted to service wells.

TESTS REPORTED TO HAVE PENETRATED PRECAMBRIAN ROCK IN THE SOUTHERN PENINSULA OF MICHIGAN

PERMIT				PRECAMBRIAN	TOTAL DEPTH	YEAR COMPLETED	
26112	Berrien Co. Berrien Twp.	10-6S-17W	Security Oil & Gas Thalman #1	4604 (-3800)	5647 (-4843)	1965	
29779	Branch Co. Sherwood Twp.	7-5S-8W	Consumers Power Co. et al Lindsey-Hostetler #1	5375 (-4485)	5439 (-4549)	1974	
29969	Branch Co. Sherwood Twp.	8-5S-8W	Consumers Power Co. et al H. Clark #1	5418 (-4539)	5475 (-4586)	1974	
23478	Charlevoix Co. Peaine Twp.	6-37N-10W	McClure Oil Co. State-Beaver Island #2	4718 (-3977)	4803 (-4062)	1961	Age Rb-Sr K-Ar Biotite 1100 1090 Feldspar 1110
23435	Charlevoix Co. Peaine Twp.	27-38N-10W	McClure Oil Co. State-Beaver Island #1	4566 (-3888)	5383 (-4705)	1961	
30682	Cheboygan Co. Waverly Twp.	24-35N-1W	North. Mich. Explor. Co. et al State-Waverly #1-24	5617 (-4816)	5753 (-4952)	1975	
29191	Huron Co. Sherman Twp.	26-15N-15E	Mobil Oil Corp. C. J. Volmering #1	8872 (-8161)	9086 (-8375)	1973	
28607	Ingham Co. Vevay Twp.	29-2N-1W	Mobil Oil Corp. Walter Kranz, Jr. #1	7690 (-6751)	7866 (-6927)	1971	
10448	Lenawee Co. Riga Twp.	32-8S-5E	Walter H. Eckert Harry Taylor #1	3865 (-3150)	3902 (-3186)	1944	
27986	Livingston Co. Osceola Twp.	11-3N-5E	Mobil Oil Corp. H. J. Messmore #1	7150?(-6170)	7589 (-6609)	1970	
11221	Monroe Co. Berlin Twp.	29-5S-10E	Joseph W. Sturman D. L. & R. L. Chapman #1	3342 (-2745)	3377 (-2780)	1945	
7702	Monroe Co. Ida Twp.	19-7S-7E	Jacob Beck Mrs. James Sanerant #1	3595 (-2926)	5495 (-4826)	1954	
25494	Monroe Co. Summerfield Twp.	16-7S-6E	Ferguson & Garrison Merlin Shimp #1	3637 (-2951)	3671 (-2985)	1964	
None	Ottawa Co. Holland Twp.	30-5N-15W	H. J. Heinz Co. H. J. Heinz Co. #2	6142 (-5523)	6221 (-5602)	1972	
29372	Presque Isle Co. Metz Twp.	13-33N-5E	Shell Oil Co. Taratuta #1-13	6738?(-5962)	6738 (-5962)	1973	Granite wash 6545? (-5769)
27199	Presque Isle Co. North Allis Twp.	29-35N-2E	Pan American Petro. Corp. D. E. Draysey #1	5877 (-5069)	5940 (-5132)	1968	
BD139	St. Clair Co. Casco Twp.	31-4N-15E	Consumers Power Co. Consumers Power Co. BD#1	4605 (-3989)	4627 (-4011)	1964	
25780	St. Clair Co. Clay Twp.	Projected	L. Bernhardt Puzzuoli #1	4152 (-3572)	4188 (-3608)	1965	
30376	St. Clair Co. Ira Twp.	17-2N-16E 14-3N-15E	Mich. Cons. Gas Co. Osterland #1-14	4449 (-3846)	4550 (-3947)	1975	
196	St. Clair Co. St. Clair Twp.	26-5N-16E	St. Clair Oil & Gas Corp. Hurst #1	4730 (-4080)	4770 (-4110)	1929	Age Rb-Sr Biotite 1020
BD151	St. Clair Co. St. Clair Twp.	7-5N-17E	Consumers Power Co. C.P.C. #1-7 BDW	4707 (-4069)	4733 (-4095)	1971	
BD152	St. Clair Co. St. Clair Twp.	7-5N-17E	Consumers Power Co. C.P.C. #2-7 BDW	4684 (-4052)	4702 (-4070)	1971	
31335	St. Joseph Co. Nottawa Twp.	11-6S-10W	Marathon Oil Co. Lloyd Cupp #1-11	5074 (-4182)	5283 (-4391)	1977	
30974	Sanilac Co. Bridgehampton Twp.	20-12N-15E	McClure Oil & Mich. Nat. Res. Hewett-Shadd Unit #1-20	8676 (-7891)	8975 (-8190)	1976	
10792	Washtenaw Co. Salem Twp.	27-1S-7E	I. C. Chamness Troy-Roddenberry Comm. #1	6075 (-5189)	6094 (-5208)	1944	
10141	Washtenaw Co. Salem Twp.	16-1S-7E	Colvin & Assoc. & Elec. Wm. F. Voss Comm. #1	6374 (-5459)	6410 (-5495)	1944	Age Rb-Sr Biotite 950
11341	Washtenaw Co. Superior Twp.	12-2S-7E	Colvin & Assoc. & Rot. St. Viola Meinzingler #1	5670 (-4852)	5692 (-4874)	1945	Age Rb-Sr Biotite 1050
BD146	Wayne Co., City of Woodhaven	22-4S-10E	Marathon Oil Co. Woodhaven BD#1	3704 (-3095)	3752 (-3143)	1969	
10430	Wayne Co. Huron Twp.	16-4S-9E	Colvin & Assoc. & Elec. Theisen Estate #1	3985 (-3360)	4046 (-3321)	1944	

29739 Gratiot Co. North Star Twp. 8-10N-2W DEEPEST EXPLORATORY WELL DRILLED IN MICHIGAN McClure Oil Co. Precambrian Sparks et al #1-8 12,176 (-11,414) 17,466 (-16,704) 1975



- ▲ REPORTED PRECAMBRIAN TEST
- ⊗ DEEPEST EXPLORATORY WELL IN MICHIGAN (PRECAMBRIAN)

TABLE 7 CUMULATIVE OIL AND GAS PRODUCTION BY COUNTY THROUGH 1979

COUNTY	CUMULATIVE PRODUCTION	
	Barrels Oil	MCF Gas
Allegan	20,234,453	32,081,587
Antrim	1,229,564	6,335,806
Arenac	47,257,856	6,856,583
Barry	749,019	0
Bay	21,219,358	7,814
Benzie	184,108	154,466
Berrien	29,757	0
Calhoun	39,666,578	86,689,114
Cass	166,945	0
Cheboygan	7,004	0
Clare	36,059,115	60,629,232
Clinton	4,121	0
Crawford	14,651,100	25,298,654
Eaton	1,719,170	22,578,793
Genesee	435,508	0
Gladwin	35,457,547	9,781
Grand Traverse	20,477,155	213,601,283
Gratiot	1,182,608	13,218,035
Hillsdale	58,584,682	80,685,602
Huron	61,324	0
Ingham	14,933,422	26,818,128
Ionia	48,479	0
Isabella	52,612,612	36,706,858
Jackson	25,377,160	40,606,464
Kalamazoo	28,923	0
Kalkaska	24,851,271	184,918,200
Kent	10,158,595	3,177,848
Lake	1,545,312	182,438
Lapeer	1,282,510	428,138
Lenawee	7,482	159,103
Livingston	13,188	30,799,044
Macomb	80,919	60,356,480
Manistee	29,297,582	94,636,732
Mason	6,145,225	18,225,244
Mecosta	10,967,648	33,055,165
Midland	69,548,410	9,679,489
Missaukee	21,231,125	20,564,229
Monroe	746,198	0
Montcalm	18,705,488	53,126,620
Montmorency	10,319	0
Muskegon	8,043,555	9,809,572
Newaygo	8,866,632	13,339,265
Oakland	86,720	5,175,281
Oceana	15,623,302	1,079,161
Ogemaw	21,789,741	10,705,281
Osceola	58,749,911	43,253,957
Oscoda	62,920	0
Otsego	39,809,442	82,099,876
Ottawa	9,444,303	5,380,759
Presque Isle	10,847	0
Roscommon	16,494,682	16,052,342
Saginaw	2,614,286	0
Shiawassee	79,754	0
St. Clair	16,423,580	169,440,372
Tuscola	2,991,985	103,517
Van Buren	12,115,526	0
Washtenaw	178,032	6,959,717
Wayne	944,523	10,055,718
Wexford	2,375,513	15,506,958
59 Counties	**803,792,444	*1,554,478,962

\*\*Includes 9,634 barrels of oil from miscellaneous fields.

\*Does not include 3,050,143 MCF of unassigned gas shown on early records.

TABLE 8 OIL PRODUCTION BY GEOLOGIC SYSTEM AND FORMATION - 1979 AND PRIOR YEARS

These data include estimates for multiple pay wells and leases when an accurate breakdown was not available

YEAR	MISSISSIPPIAN		DEVONIAN		Detroit River	SILURIAN	ORDOVICIAN	Total Barrels Oil All Formations
	Marshall	Berea	Traverse	Dundee- Reed City		Salina- Niagaran	Trenton- Black River	
	1938	1925	1927	1927	1939	1952	1935	
1925 Through 1929		876,559	873,777	4,017,451				5,767,787
(Cumulative-5 year interval)								
1930 Through 1934		318,171	995,439	31,870,671				33,184,281
(Cumulative-5 year interval)								
1935 Through 1939	7,411	310,313	13,814,816	72,339,293	14,000		43,565	86,529,398
(Cumulative-5 year interval)								
1940 Through 1944	22,040	229,262	27,856,377	67,939,211	727,418		348,477	97,122,785
(Cumulative-5 year interval)								
1945 Through 1949	17,283	166,687	16,914,771	62,438,443	4,302,309		106,510	83,946,003
(Cumulative-5 year interval)								
1950 Through 1954	9,068	125,089	16,974,863	38,058,703	11,878,669	43,091	225,180	67,314,663
(Cumulative-5 year interval)								
1955 Through 1959	8,183	110,639	8,788,785	25,618,934	13,716,790	568,085	3,108,341	51,920,757
(Cumulative-5 year interval)								
1960 Through 1964	6,090	84,222	6,777,853	15,725,957	8,260,636	4,611,123	48,022,216	83,488,097
(Cumulative-5 year interval)								
1965 Through 1969	5,293	113,898	3,831,321	12,186,197	8,387,775	4,195,694	39,132,615	67,852,793
(Cumulative-5 year interval)								
1970 Through 1974	4,553	97,444	2,669,026	9,115,667	10,992,939	25,986,136	20,288,822	69,174,372
(Cumulative-5 year interval)								
1975	930	21,702	435,364	1,487,417	2,377,358	17,604,834	2,492,270	24,419,525
1976	892	22,089	414,762	1,425,009	2,339,423	24,115,191	2,103,997	30,421,363
1977	937	22,261	490,336	1,422,637	2,269,774	26,832,419	1,926,139	32,964,503
1978	819	19,810	425,975	1,263,315	2,320,982	28,935,064	1,697,522	34,663,487
1979	958	22,411	424,597	1,604,906	2,740,009	28,524,674	1,429,117	34,746,672

TRENDS IN MICHIGAN OIL PRODUCTION  
PRINCIPAL PRODUCING FORMATIONS

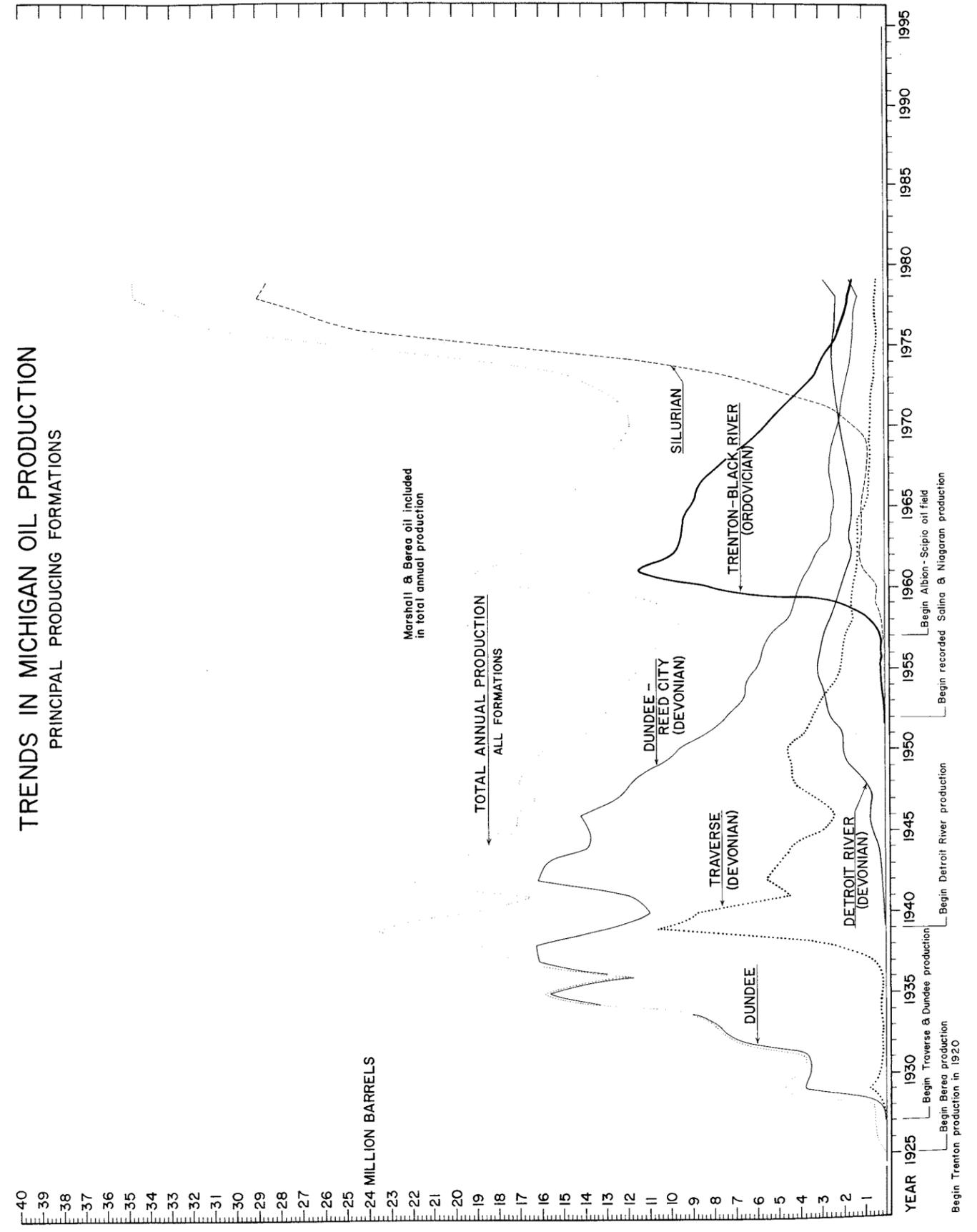


TABLE 9 GAS PRODUCTION BY GEOLOGIC SYSTEM AND FORMATION - 1979 AND PRIOR YEARS

YEAR	GAS PRODUCTION BY GEOLOGIC SYSTEM AND FORMATION - 1979 AND PRIOR YEARS										Total MCF Gas All Formations									
	CENOZOIC	MISSISSIPPIAN		DEVONIAN			SILURIAN	ORDOVICIAN		First Year of Recorded Gas Production by Formation										
	Glacial Drift	Stray-Marshall	Berea	Antrim Shale	Traverse	Dundee-Reed City	Detroit River	Salina-Niagaran	Trenton-Black River											
1949	1931	1936	1947	1934	1929	1946	1929	1954												
1925 Through 1929	(Cumulative-5 year interval) . . . . .										1,887,732	74,867	1,962,599							
1930 Through 1934	(Cumulative-5 year interval) . . . . .										3,001,963	3,744	6,034,206	61,578	9,101,491					
1935 Through 1939	(Cumulative-5 year interval) . . . . .										30,769,471	1,391,076	69,894	8,862,165	6,331	41,098,937				
1940 Through 1944	(Cumulative-5 year interval) . . . . .										70,498,989	5,860,831	3,716,132	7,647,510	79,983	87,803,445				
1945 Through 1949	(Cumulative-5 year interval) . . . . .										8,020	80,217,680	1,467,460	52,495	1,414,004	15,710,636	793,763	7,393,744	107,057,802	
1950 Through 1954	(Cumulative-5 year interval) . . . . .										0	18,033,449	916,202	55,626	1,913,497	5,361,578	6,997,257	11,316,082	10,725	44,604,416
1955 Through 1959	(Cumulative-5 year interval) . . . . .										0	6,834,419	148,085	56,686	266,623	2,287,066	12,539,252	20,117,524	6,609,393	48,859,048
1960 Through 1964	(Cumulative-5 year interval) . . . . .										0	2,874,824	42,020	156,485	876,356	1,117,064	19,252,334	66,799,392	45,443,994	136,562,469
1965 Through 1969	(Cumulative-5 year interval) . . . . .										0	2,636,857	814,223	220,305	454,198	150,659	10,649,603	106,149,601	57,253,914	178,329,360
1970 Through 1974	(Cumulative-5 year interval) . . . . .										0	157,966	391,050	760,309	265,850	219,781	8,342,041	148,999,929	53,573,311	212,710,237
1975	0	70,370	84,591	136,853	0	2,475	1,457,146	91,142,482	9,784,250	102,678,067										
1976	0	169,433	38,827	83,923	0	64,126	1,306,451	109,681,927	8,905,918	120,250,105										
1977	0	43,051	59,301	170,395	12,826	32,146	1,123,994	123,858,773	7,925,966	133,226,452										
1978	0	41,128	30,132	150,434	0	23,184	1,011,884	141,876,290	7,402,205	150,535,257										
1979	0	33,952	8,093	139,212	64,429	114,563	1,725,677	150,971,034	6,673,294	157,293,719										

CHANGES IN GAS VOLUMETRIC MEASUREMENT

IN AN ATTEMPT TO OBTAIN NATIONAL UNIFORMITY OF DATA, ALL ANNUAL AND CUMULATIVE GAS PRODUCTION FIGURES FOR MICHIGAN WERE CONVERTED TO A STANDARD BASE PRESSURE FOR VOLUMETRIC MEASUREMENT OF 14.73 POUNDS PER SQUARE INCH IN 1978. THIS CONVERSION AND SUBSEQUENT ADJUSTMENT OF GAS PRODUCTION FIGURES RESULTED IN SLIGHT CHANGES IN CUMULATIVE PRODUCTION VOLUMES IN THOSE FIELDS WHICH HAD BEEN MEASURED AT VARYING PRESSURE BASES IN PRIOR YEARS.

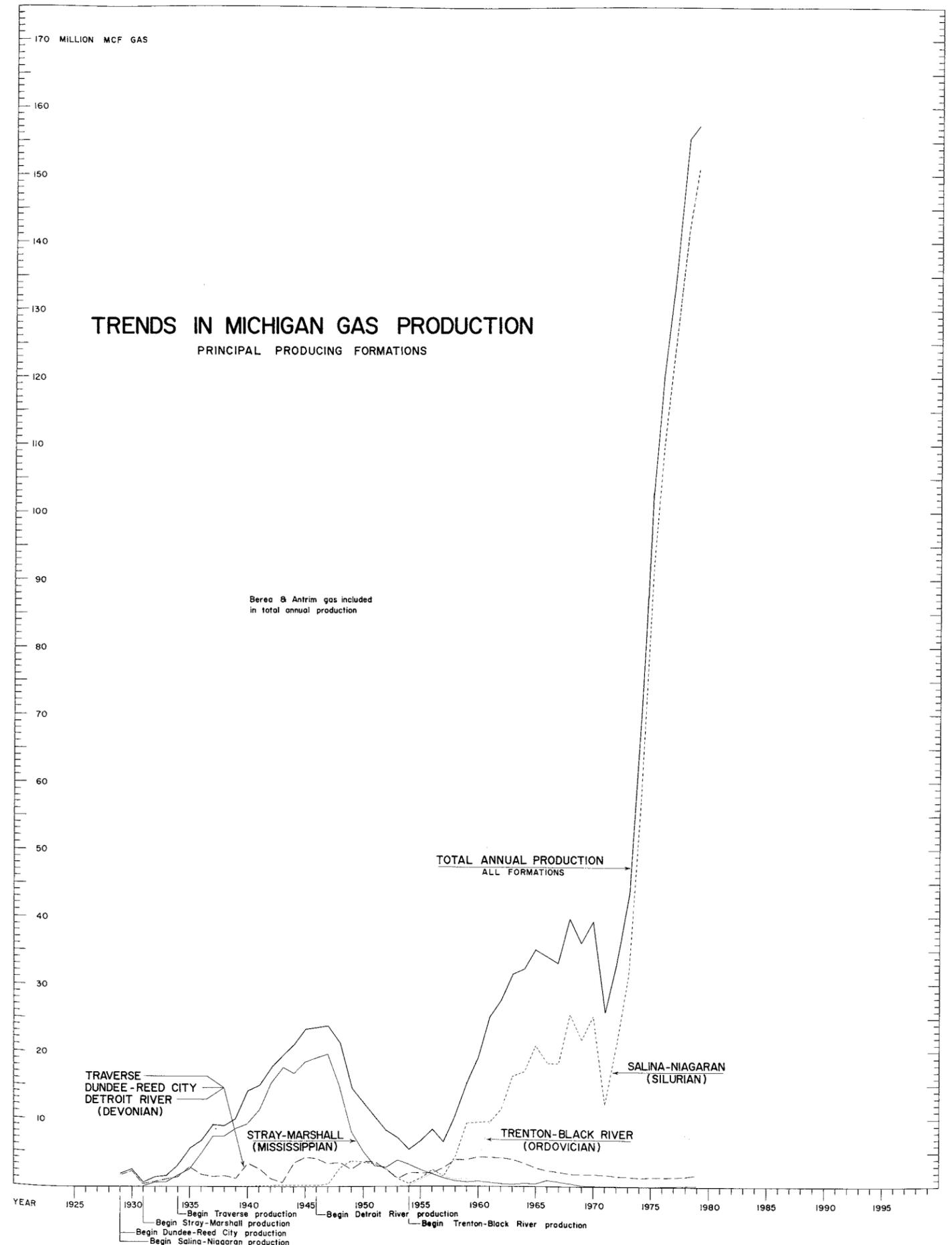


TABLE 10 CUMULATIVE OIL PRODUCTION BY GEOLOGIC SYSTEM AND FORMATION - 1979 AND PRIOR YEARS

These data include estimates for multiple pay wells and leases when an accurate breakdown was not available

Y E A R	First Year of Recorded Oil Production by Formation							Total Barrels Oil All Formations
	MISSISSIPPIAN		DEVONIAN		SILURIAN	ORDOVICIAN		
	Marshall	Berea	Traverse	Dundee Reed City	Detroit River	Salina- Niagaran	Trenton- Black River	
	1938	1925	1927	1927	1939	1952	1935	
1925 Through 1929		876,559	873,777	4,017,451				5,767,787
1930 Through 1934		1,194,730	1,869,216	35,888,122				38,952,068
1935 Through 1939	7,411	1,505,043	15,684,032	108,227,415	14,000		43,565	125,481,466
1940 Through 1944	29,451	1,734,305	43,540,409	176,166,626	741,418		392,042	222,604,251
1945 Through 1949	46,734	1,900,992	60,455,180	238,605,069	5,043,727		498,552	306,550,254
1950 Through 1954	55,802	2,026,081	77,430,043	276,663,772	16,922,396	43,091	723,732	373,864,917
1955 Through 1959	63,985	2,136,720	86,218,828	302,282,706	30,639,186	611,176	3,832,073	425,784,674
1960 Through 1964	70,075	2,220,942	92,996,681	318,008,663	38,900,822	5,222,299	51,854,289	509,273,771
1965 Through 1969	75,368	2,334,840	96,848,002	330,194,860	47,288,597	9,417,993	90,986,904	577,126,564
1970 Through 1974	79,668	2,077,719	83,788,468	311,232,618	102,632,670	35,417,637	111,307,955	646,555,321
1975	80,598	2,442,977	104,909,422	335,513,416	61,197,257	53,052,303	113,800,446	671,084,960
1976	81,490	2,465,066	105,324,184	336,938,425	63,536,680	77,167,494	115,904,443	701,426,388
1977	82,427	2,487,327	105,814,520	338,361,062	65,806,454	103,999,913	117,830,582	734,382,285
1978	83,246	2,507,137	106,240,495	339,624,377	68,127,436	132,934,977	119,528,104	769,045,772
1979	84,204	2,529,548	106,665,092	341,229,283	70,867,445	161,459,651	120,957,221	803,792,444

Some formations show a loss in cumulative production from 1973 to 1975. This is due to recently initiated changes in the method of crediting production to each respective formation in multiple-pool fields.

TABLE 11 CUMULATIVE GAS PRODUCTION BY GEOLOGIC SYSTEM AND FORMATION - 1979 AND PRIOR YEARS

Y E A R	CENOZOIC	MISSISSIPPIAN			DEVONIAN			SILURIAN	ORDOVICIAN	Cumulative MCF All Formations
	Glacial Drift	Stray- Marshall	Berea	Antrim Shale	Traverse	Dundee- Reed City	Detroit River	Salina- Niagaran	Trenton- Black River	
	First Year of Recorded Gas Production by Formation									
	1949	1931	1936	1947	1934	1929	1946	1929	1954	
1925 Through 1929						1,887,732		74,867		1,962,599
1930 Through 1934		3,001,963			3,744	7,921,938		136,445		11,064,090
1935 Through 1939		33,771,434	1,391,076		73,638	16,784,103		142,776		52,163,027
1940 Through 1944		104,270,423	7,251,907		3,789,770	24,431,613		222,759		139,966,472
1945 Through 1949	8,020	184,488,103	8,719,367	52,495	5,203,774	40,142,249	793,763	7,616,503		247,024,274
1950 Through 1954	8,020	202,521,522	9,635,569	108,121	7,117,271	45,503,827	7,791,020	18,932,585	10,725	291,628,690
1955 Through 1959	8,020	209,355,971	9,783,654	164,807	7,383,894	47,790,893	20,330,272	39,050,109	6,620,118	340,487,738
1960 Through 1964	8,020	212,230,795	9,825,674	321,292	8,260,250	48,907,957	39,582,606	105,849,501	52,064,112	477,050,207
1965 Through 1969	8,020	214,867,652	10,639,897	541,597	8,714,448	49,058,616	50,232,209	211,999,102	109,318,026	655,379,567
1970 Through 1974	8,020	213,298,888	11,249,818	1,284,841	9,233,011	48,568,150	60,395,689	357,050,974	162,958,467	864,047,858
1975	8,020	213,369,158	10,854,319	1,421,694	8,971,034	41,283,187	69,832,340	448,196,030	176,537,235	973,572,058
1976	8,020	213,538,591	10,893,146	1,505,617	8,971,034	41,347,313	71,138,791	557,877,957	185,443,153	1,093,822,567
1977	8,020	213,581,642	10,952,447	1,670,012	8,983,860	41,379,459	72,262,785	681,736,730	193,369,119	1,227,049,019
1978	8,020	213,622,770	10,982,579	1,820,446	8,983,860	41,402,643	73,274,669	823,613,020	200,771,324	1,377,584,276
1979	8,020	213,656,722	10,990,672	1,959,658	9,048,289	41,517,206	75,000,346	974,584,854	207,444,618	1,554,478,962

Does not include 3,050,143 Mcf of unassigned gas from early records.

Some formations show a loss in cumulative production from 1973 to 1975. This is due to recently initiated change in the method of crediting production to each respective formation in multiple-pool fields.

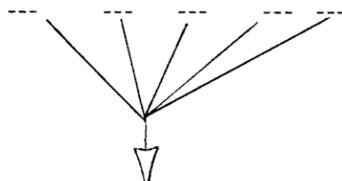
TABLE 12 CUMULATIVE WELL COMPLETIONS BY COUNTY THROUGH 1979

County	Area of County (including in-land water)		Classification of Completed Wells (New Hole) (does not include reworked wells)					Approximate Well Density (All Classes) Wells: Sq. Miles
	Square Miles	Acres	Oil Wells	Gas Wells	Service Wells		Total Completions	
					GS - OBS - BDW - LPG	Dry Holes		
Alcona	694	444,160				23	23	1:30
Allegan	837	535,680	1,316	89	174	1,718	3,297	4:1
Alpena	590	377,600		1		15	16	1:37
Antrim	520	332,800	5	2	1	54	62	1:8
Arenac	369	236,160	406	44	1	413	864	2:1
Barry	571	365,440	74		4	140	218	1:3
Bay	451	288,640	458	1		230	689	2:1
Benzie	342	218,880	2			21	23	1:15
Berrien	584	373,760	9			75	84	1:7
Branch	517	330,880				67	67	1:8
Calhoun	716	458,240	304	55	4	448	811	1:1
Cass	505	323,200	54			135	189	1:3
Charlevoix	451	288,640				15	15	1:30
Cheboygan	798	510,720	6			41	47	1:17
Chippewa	1,651	1,056,640	Northern Peninsula County			6	6	1:275
Clare	577	369,280	409	173	495	376	1,453	2:1
Clinton	573	366,720	4			83	87	1:7
Crawford	566	362,240	111	11	9	48	179	1:3
Delta	1,202	769,280	Northern Peninsula County			1	1	1:1200
Eaton	572	366,080	31	17		96	144	1:4
Emmet	477	305,280				5	5	1:95
Genesee	649	415,360	31	1		46	78	1:8
Gladwin	512	327,680	748		1	284	1,033	2:1
Grand Traverse	490	313,600	105	105	1	361	572	1:1
Gratiot	566	362,240	46	74	29	280	429	1:1
Hillsdale	604	386,560	309	2		511	822	1:1
Huron	824	527,360	5			80	85	1:10
Ingham	560	358,400	80	15	13	124	232	1:2
Ionia	578	369,920	9			85	94	1:6
Iosco	563	360,320				26	26	1:22
Isabella	573	366,720	662	163	58	500	1,383	2:1
Jackson	717	458,880	138	3		290	431	1:2
Kalamazoo	580	371,200	19			114	133	1:4
Kalkaska	573	366,720	147	72	1	247	467	1:1
Kent	868	555,520	461	6	2	349	829	1:1
Lake	577	369,280	51	1	8	159	219	1:3
Lapeer	662	423,680	51	6		65	122	1:5
Leelanau	374	239,360				9	9	1:42
Lenawee	760	486,400	4	72		114	190	1:4
Livingston	583	373,120	2	35	55	106	198	1:3
Luce	929	594,560	Northern Peninsula County			2	2	1:465
Mackinac	1,081	691,840	Northern Peninsula County			2	2	1:541
Macomb	481	307,840	6	73	36	380	495	1:1
Manistee	568	363,520	176	71	10	303	560	1:1
Mason	505	323,200	139	16	1	323	479	1:1
Mecosta	570	364,800	130	198	227	425	980	2:1
Midland	523	334,720	902	2	1	282	1,189	2:1
Missaukee	572	366,080	228	64	105	227	624	1:1
Monroe	564	360,960	45			113	158	1:4
Montcalm	720	460,800	383	221	270	613	1,487	2:1
Montmorency	567	362,880	4	2		59	65	1:9
Muskegon	519	332,160	445	120		390	955	2:1
Newaygo	867	554,880	206	47	161	391	805	1:1
Oakland	899	575,360	9	19	5	94	127	1:7
Oceana	541	346,240	339	10		559	908	2:1
Ogemaw	580	371,200	540	21	35	182	778	1:1
Osceola	585	374,400	346	121	201	383	1,051	2:1
Oscoda	568	363,520	2			12	14	1:41
Otsego	538	344,320	135	48	11	286	480	1:1
Ottawa	572	366,080	474	19	2	500	995	2:1
Presque Isle	678	433,920	8	7		113	128	1:5
Roscommon	573	366,720	195	14	1	105	315	1:2
Saginaw	814	520,960	380	2		177	559	1:1
Sanilac	961	615,040				56	56	1:17
Schoolcraft	1,229	786,560	Northern Peninsula County			2	2	1:615
Shiawassee	540	345,600	9			57	66	1:8
St. Clair	751	480,640	265	188	112	907	1,488	2:1
St. Joseph	518	331,520				23	23	1:23
Tuscola	820	524,800	172	5		111	288	1:3
Van Buren	615	393,600	729			1,012	1,741	3:1
Washtenaw	723	462,720	10	18	5	116	150	1:5
Wayne	625	400,000	12	24	18	30	138	1:5
Wexford	570	364,800	13	16		90	119	1:5
73 Counties	47,342	Totals:	12,359	2,274	2,057	60	16,109	32,859

Total includes gas storage, observation, salt water disposal, water injection wells, and brine wells.

TABLE 13 PERMITS, DISCOVERIES, WELL COMPLETIONS, WELLS AT END OF YEAR, 1979 AND PRIOR YEARS

Year	Permits Issued	Classification of Well Completions					Fields or Pools Dis- covered		Wells at End of Year							
		Oil Wells	Gas Wells	Service Wells		Dry Holes	Total Com- pletions	Oil	Gas	Wells	GS	OBS	Inj.* P.M.	LPG*		
				GS-OBS-SWD	LPG											
1925	0	3				3										
1926	0	89				16		1								
1927	16	218		3		46		1	1							
1928	283	79		30		49		1								
1929	576	324		22		137										
1930	257	154		19		158		2	3							
1931	111	59		17		52			1	634		64				
1932	184	109		10		64		1		645		72				
1933	429	223		10		85		3	1	831		70				
1934	444	272		47		150		3	2	977		117				
1935	700	319		101		221		1	5	1,167		212				
1936	777	333		206		268		6	5	1,360		402				
1937	973	622		66		267		6	1	1,778		442				
1938	996	580		27		411		17	2	2,141		448				
1939	1,465	845		56		578		8	2	2,684		485				
1940	1,121	557		59		565		8	13	2,928		510				
1941	1,044	441		97		413		7	8	3,158		577		13		
1942	570	297		74		331		14	4	3,324		631		13		
1943	627	233		47		355		12	8	3,386		639		13		
1944	741	246		64		400		10	2	3,433		651		13		
1945	755	271		57	6	467		11	11	3,536		663		19		
1946	822	223		53	86	461		19	10	3,520		547		226		
1947	886	318		43	148	387		10	4	3,532		534		409		
1948	918	371		32	77	437		10	5	3,554		502		482		
1949	999	439		22	73	473		21	2	3,818		471		554		
1950	901	336		28	47	473		18	4	3,954		471		610		
1951	744	227		20	43	466		16	6	3,911		417		673		
1952	694	261		30	51	370		14	5	3,979		388		732		
1953	824	258		18	110	360		11	6	4,089		313		901		
1954	573	214		15	2	338		18		4,167		316		903		
1955	484	204		13	1	291		12	2	4,223		321		904		
1956	476	196		12	28	227		12	2	4,191		310		932		
1957	461	176		40	35	207		12	5	4,233		335		977		
1958	481	166		20	36	227		10	7	4,201		345		1,025		
1959	727	257		47	72	272		8	7	4,327		323		1,094		
1960	904	372		19	79	441		7	4	4,555		249		1,337		
1961	849	207		57	74	476		13	10	4,619		292		1,420		
1962	711	148		62	53	474		5	7	4,603		300		1,531		
1963	704	135		72	56	384		7		4,598		367		1,601		
1964	583	82		48	126	376		6	4	4,588		404		1,632		
1965	494	53		34	107	291		6	7	4,368		424		1,859		
1966	430	56		45	11	290		8	3	4,315		429		1,896		
1967	405	69		38	26	287		8	2	4,273		481		1,921		
1968	378	70		12	30	251		9	4	4,372		414		2,010		
1969	379	73		9	26	239		7	3	4,349		410		2,034		
1970	425	50		16	108	3	211	388	11	7	4,324		418		2,119	
1971	425	83		31	83	13	186	396	28	13	4,323		418		2,299	
1972	423	84		38	64	2	186	374	34	23	4,313		450		2,377	
1973	445	81		47	67	0	173	369	38	37	4,334		491		2,462	
1974	503	134		61	54	2	235	484	55	39	4,376		488		2,494	
1975	653	167		40	38	0	330	575	55	19	---	---	---	---	56	
1976	645	120		57	50	0	333	560	30	36	---	---	---	---	56	
1977	692	136		70	49	1	341	597	35	36	---	---	---	---	57	
1978	690	146		57	74	0	325	602	29	25	---	---	---	---	57	
1979	649	173		58	68	0	290	589	42	28	---	---	---	---	---	



Figures in these columns represent the well count at the end of



