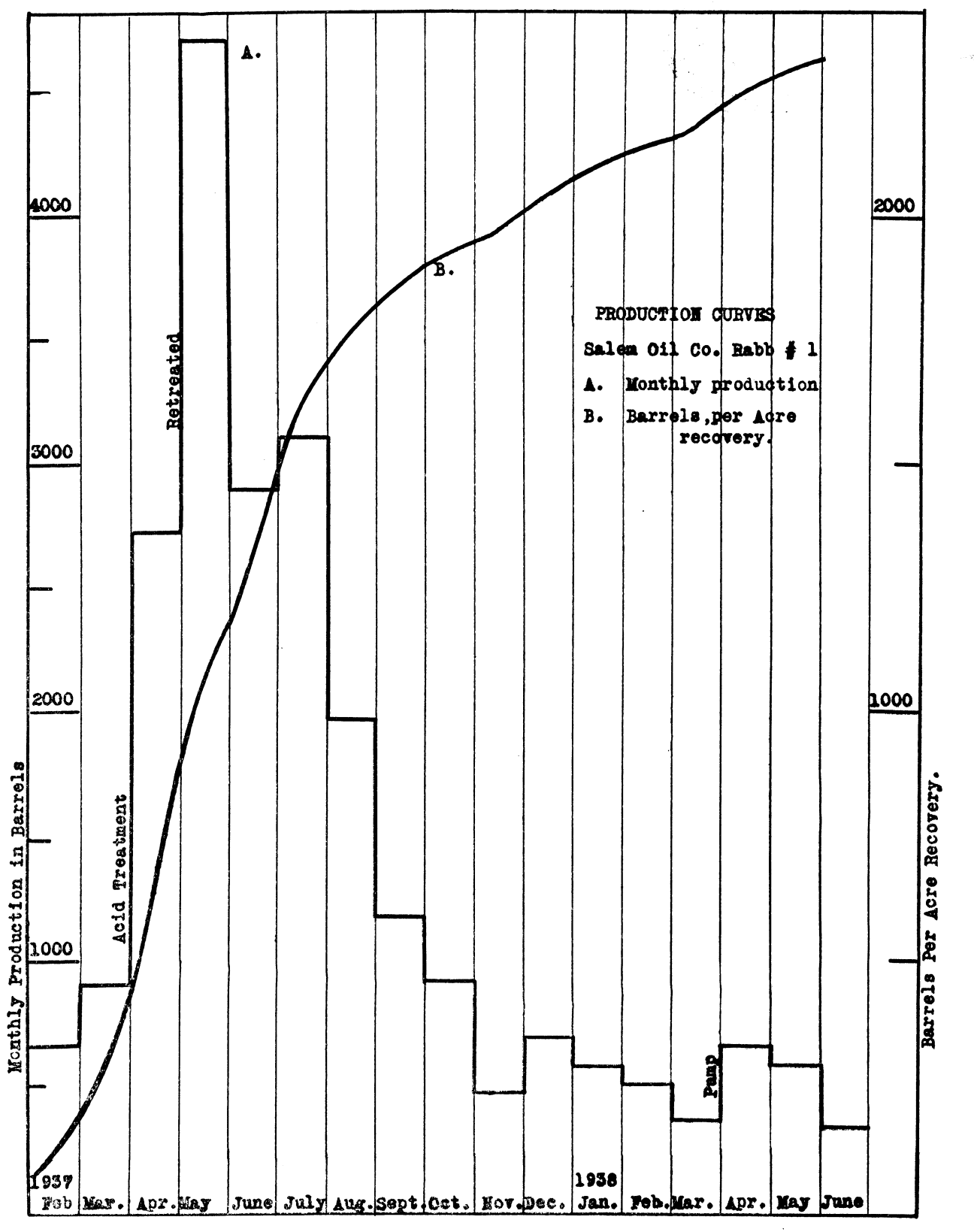

PRODUCTION CURVES
Salem Oil Co. Rabb # 1
A. Monthly production
B. Barrels, per Acre recovery.
A.
B.
Retreated
Acid Treatment
Pump
Monthly Production in Barrels
Barrels Per Acre Recovery.
4000
3000
2000
1000
2000
1000
1937
Feb
Mar.
Apr.
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.
1938
Jan.
Feb.
Mar.
Apr.
May
June

AREAL GEOLOGY OF ALLEGAN COUNTY

THICKNESS OF MARSHALL FORMATION

LEGEND

MICHIGAN — LOWER MARSHALL

NAPOLEON — COLDWATER

COLDWATER-LOWER MARSHALL CONTACT

NAPOLEON-LOWER MARSHALL CONTACT

LOCATION
OIL WELL
DRY HOLE
TEST WELL

SCALE MILES

0 1 2 3 4 5 6

CONTOUR INTERVAL - 50 FEET

C. H. RIGGS & HELEN MARTIN — JULY 16, 1938

PLATE- 2

R 16 W R 15 W R 14 W R 13 W R 12 W R 11 W

T 4 N T 3 N T 2 N T 1 N

LAKE TOWN FILLMORE OVERISEL EMMET Mc DONOUGH HEIGHTON
SAUGATUCK MANLIUS HEATH MONTEREY HOPKINS MAYLAND
ALLEGAN WATSON MARTIN
VALLEY CHESHIRE TROWBRIDGE OTSEGO GUN PLAINS

Mm Mc

CONTOUR MAP OF PRE-GLACIAL TOPOGRAPHY
ALLEGAN COUNTY
CONTOURS DRAWN ON BASE OF DRIFT
CONTOUR INTERVAL 100 FEET

SCALE MILES 0 1 2 3 4 5

C.H.RIGGS — PLATE - 3 — JULY 22 1938

OTTAWA COUNTY — KENT COUNTY — IONIA COUNTY — BARRY COUNTY — KALAMAZOO COUNTY — VAN BUREN COUNTY

LAKE MICHIGAN

HOLLAND — BLACK LAKE

Graafschap — Overisel — Hamilton — Diamond Springs — Burnip's Cor's — Salem Center — Dorr — Moline — Cornning — Green L. — Millards — Wayland — Monterey — Hopkins — Bradley — New Richmond — Saugatuck — Douglas — Fennville — Dunningville — Rumont L. — Shelbyville — Ganges — Mill Grove — Allegan — Kellogg — Martin — Hooper — Pine L. — Pearl — Belknap — Glenn — Spring Grove — Bakersville — Pullman — Upper Scott Lakes — Lower Scott Lakes — Chicora — Hawk Head — Leisure — Lee — Otsego — Plainwell — Swan L. — Crooked Lake — Hutchins L. — Mirror L. — Gun L. — Base Line L. — Eagle L. — Duck L. — Rosierhout L.

LAKETOWN T.4N.,R.16W. — FILLMORE T.4N.,R.15W. — OVERISEL T.4N.,R.14W. — SALEM T.4N.,R.13W. — DORR T.4N.,R.12W. — LEIGHTON T.4N.,R.11W.

SAUGATUCK T.3N.,R.16W. — MANLIUS T.3N.,R.15W. — HEATH T.3N.,R.14W. — MONTEREY T.3N.,R.13W. — HOPKINS T.3N.,R.12W. — WAYLAND T.3N.,R.11W.

GANGES T.2N.,R.16W. — CLYDE T.2N.,R.15W. — VALLEY T.2N.,R.14W. — ALLEGAN T.2N.,R.13W. — WATSON T.2N.,R.12W. — MARTIN T.2N.,R.11W.

CASCO T.1N.,R.16W. — LEE T.1N.,R.15W. — CHESHIRE T.1N.,R.14W. — TROWBRIDGE T.1N.,R.13W. — OTSEGO T.1N.,R.12W. — GUN PLAIN T.1N.,R.11W.

Pere Marquette R.R. — Rabbit River — Kalamazoo River — New York Central R.R. — Indiana and Michigan R.R. — Grand Rapids and Indiana R.R.

EXPLANATION

- ○ LOCATION
- ● OIL WELL
- ✲ GAS WELL
- ✧ DRY HOLE
- ✦ OIL SHOW
- ✲ GAS SHOW
- ◉ ABANDONED WELL
- ◆ BRINE WELL

STRUCTURAL CONTOUR MAP OF ALLEGAN COUNTY

CONTOURS DRAWN ON TOP OF TRAVERSE LIMESTONE

CONTOUR INTERVAL 20 FEET

BROKEN LINES ARE TENTATIVE

SCALE

MILES 0 1 2 3 4 5 6

C. H. RIGGS — PLATE - 4 — SEPT 7 1938

HOLLAND — BLACK LAKE — OTTAWA COUNTY

MICHIGAN LAKE

Graafschap — Overisel — Moline — Dorr — Gornning — Dohr — Diamond Springs — Hamilton — Hilliards — WAYLAND — Bradley — Hopkins — Monterey — Shelbyville — Martin — Kellogg — Hooper — Plainwell — OTSEGO — Mill Grove — ALLEGAN — New Richmond — SAUGATUCK — DOUGLAS — Dunningville — Fennville — Ganges — Glenn — Belknap — Pearl — Spring Grove — Bakersville — Pullman — Hawk Head — Leisure — Chicora — Lees — VAN BUREN COUNTY — KALAMAZOO COUNTY — BARRY COUNTY

LAKETOWN T.4N.R.16W. — FILLMORE T.4N.R.15W. — OVERISEL T.4N.R.14W. — SALEM T.4N.R.13W. — DORR T.4N.R.12W. — LEIGHTON T.4N.R.11W.

SAUGATUCK T.3N.R.16W. — MANLIUS T.3N.R.15W. — HEATH T.3N.R.14W. — MONTEREY T.3N.R.13W. — HOPKINS T.3N.R.12W. — WAYLAND T.3N.R.11W.

GANGES T.2N.R.16W. — CLYDE T.2N.R.15W. — VALLEY T.2N.R.14W. — ALLEGAN T.2N.R.13W. — WATSON T.2N.R.12W. — MARTIN T.2N.R.11W.

CASCO T.1N.R.16W. — LEE T.1N.R.15W. — CHESHIRE T.1N.R.14W. — TROWBRIDGE T.1N.R.13W. — OTSEGO T.1N.R.12W. — GUNPLAIN T.1N.R.11W.

-1000 -900 -800 -700 -600 -500

EXPLANATION

- LOCATION
- OIL WELL
- GAS WELL
- DRY HOLE
- OIL SHOW
- GAS SHOW
- ABANDONED WELL
- BRINE WELL

STRUCTURAL CONTOUR MAP
OF
SALEM OIL FIELD

CONTOURS DRAWN ON TOP OF TRAVERSE LIMESTONE
CONTOUR INTERVAL 20 FEET
BROKEN LINES ARE TENTATIVE

SCALE
ONE MILE
0 1/4 1/2 3/4 1

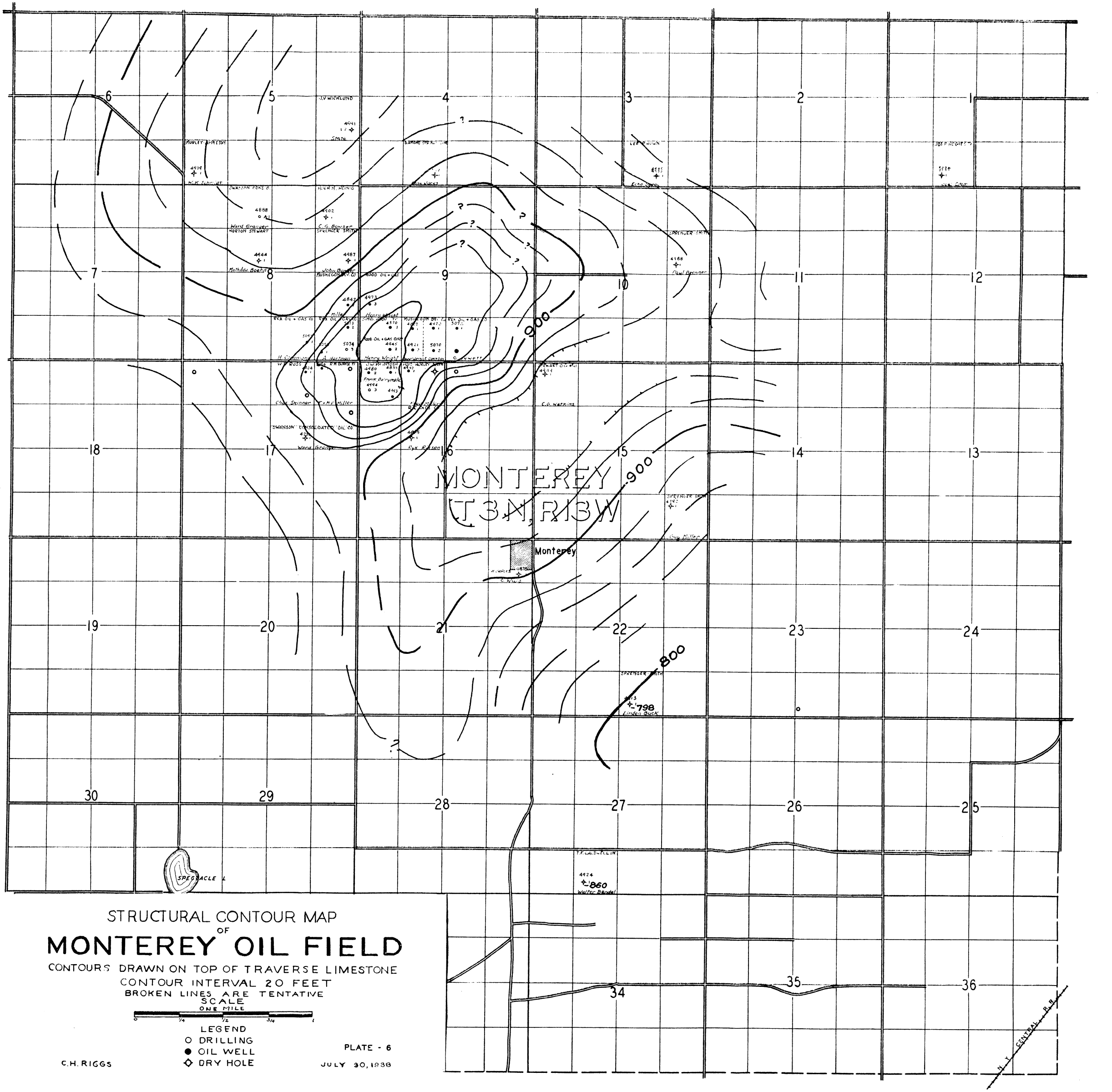
LEGEND
○ DRILLING
● OIL WELL
◇ DRY HOLE

PLATE - 5

C.H. RIGGS

JULY 30 1938

-1042
-888?
-945
-1000
-920
-965
-900
1000
Burnips Cor.
Salem Center
T 1 N R 8 W
Diamond Springs



STRUCTURAL CONTOUR MAP OF MONTEREY OIL FIELD

CONTOURS DRAWN ON TOP OF TRAVERSE LIMESTONE

CONTOUR INTERVAL 20 FEET

BROKEN LINES ARE TENTATIVE

SCALE

ONE MILE

0 1/4 1/2 3/4 1

LEGEND

O DRILLING

● OIL WELL

◇ DRY HOLE

C.H. RIGGS

PLATE - 6

JULY 30, 1938

STRUCTURAL CONTOUR MAP
OF
DORR OIL FIELD

CONTOURS DRAWN ON TOP OF TRAVERSE LIMESTONE
CONTOUR INTERVAL 10 FEET
BROKEN LINES ARE TENTATIVE

SCALE
ONE MILE

LEGEND
- ○ DRILLING
- ● OIL WELL
- ◇ DRY HOLE

PLATE - 7

C.H. RIGGS

JULY 30, 1938

T4N R12W

DORR

Moline

-970

-913

-900

-911

LAKE SHORE & MICHIGAN SOUTHERN R.R.

GRAND RAPIDS & IND.

LENORAN PET. CO.

SWANSON CONS. OIL

BADGER BASIN CO.

EUREKA DEV. CO.

GULF REFINING CO.

COLUMBIA O. CO.

MUSKEGON DEV. CO.

LENTZ & MILLER

A. JORGENSEN

WISNEWSKI

V. FRITTA

AUGUST TOEPKE

P.C. LENTZ Tr.

R.C. LENTZ Tr.

L.M. CAULSKY

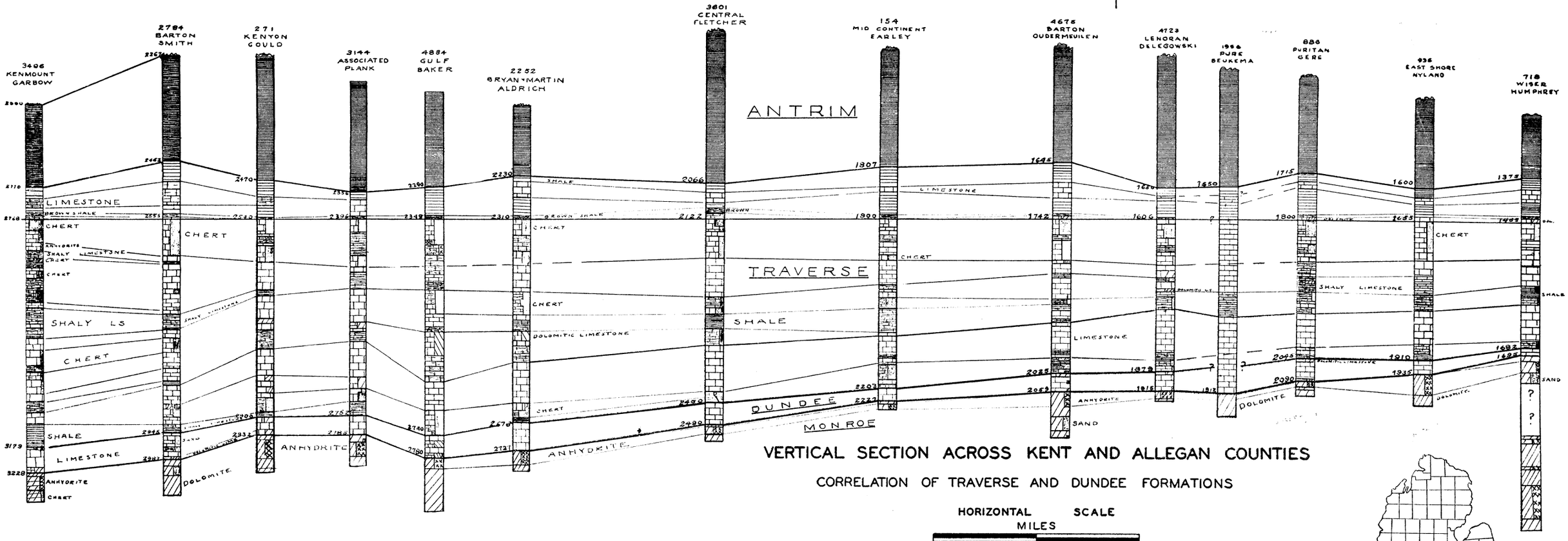
E.W. MILLER

MEGAL BEAN

W. SMITH

ACTON & MOSSBROOK

KENT CO. | ALLEGAN CO.

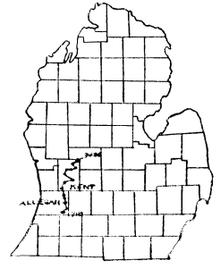


VERTICAL SECTION ACROSS KENT AND ALLEGAN COUNTIES

CORRELATION OF TRAVERSE AND DUNDEE FORMATIONS

HORIZONTAL SCALE
MILES
0 5 10

VERTICAL SCALE
FEET
0 50 100 150 200



C. H. RICCS

MAY 17, 1938

PLATE - 9

ALLEGAN COUNTY
MICHIGAN
JUNE 30 1937

SCALE
MILES
0 1 2

N

CONTOUR MAP OF ALLEGAN COUNTY SHOWING TOTAL THICKNESS OF TRAVERSE SHALE AND LIMESTONE AND DUNDEE LIMESTONE

LOCATION OF DEEP WELLS IN ALLEGAN CO.

LOCATION OF SECTIONS IN FIGURE 11 -

T. — THICKNESS OF TRAVERSE LIMESTONE
D. — THICKNESS OF DUNDEE LIMESTONE

CONTOUR INTERVAL - 10 FEET

SCALE MILES
0 1 2 3 4 5

C. H. RIGGS
JUNE 21, 1938
PLATE - 10

EXPLANATION
- LOCATION
- OIL WELL
- GAS WELL
- DRY HOLE
- OIL SHOW
- GAS SHOW
- ABANDONED WELL
- BRINE WELL

MICHIGAN LAKE

OTTAWA COUNTY | KENT COUNTY | IONIA COUNTY

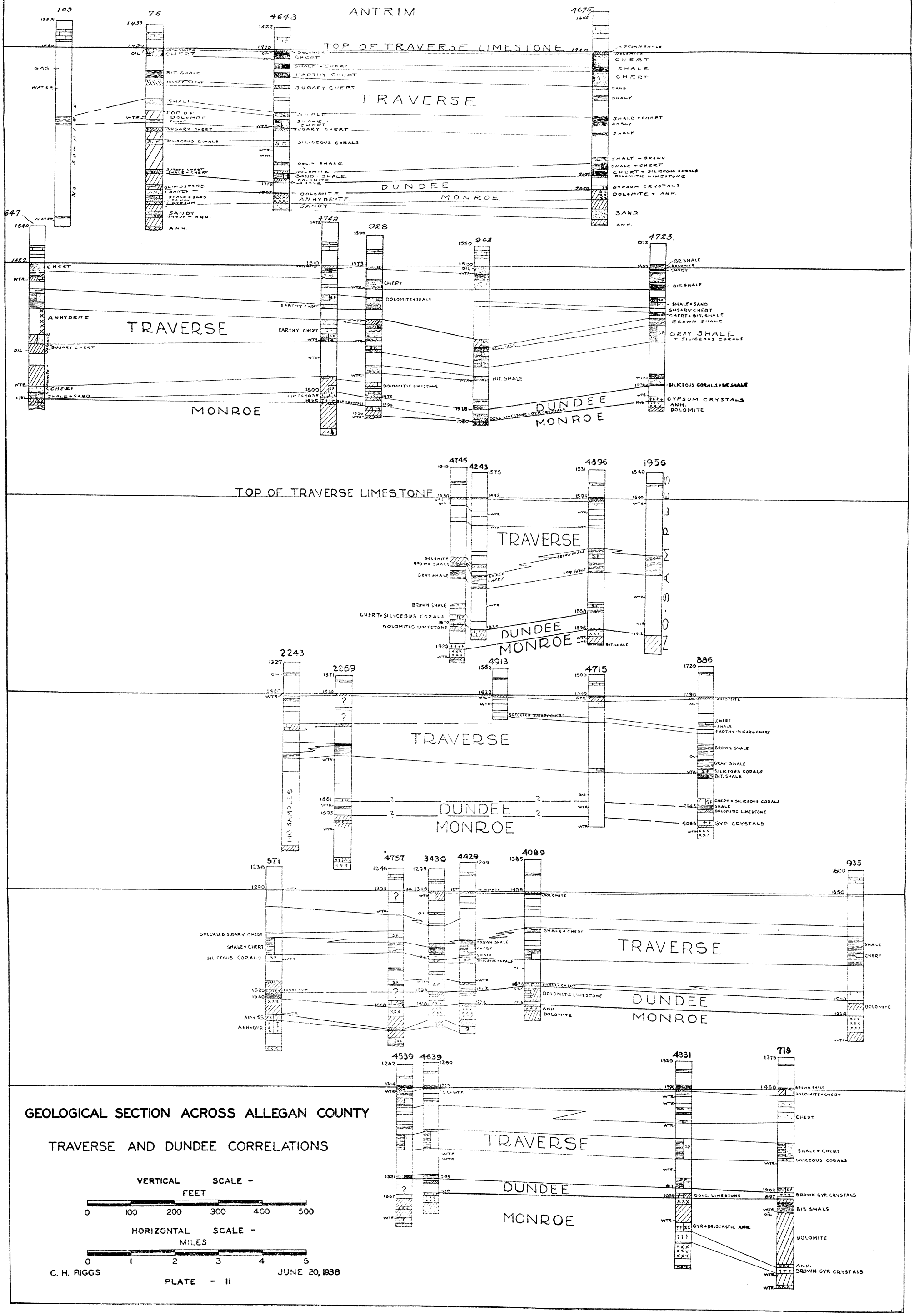
VAN BUREN COUNTY | KALAMAZOO COUNTY | BARRY COUNTY

HOLLAND
BLACK LAKE
Graafschap
Overisel
Hamilton
Diamond Springs
Bunnips Corners
Salem Center
Dorr
Moline
Gornning
Hillards
WAYLAND
Bradley
Shelbyville
Monterey
Hopkins
SAUGATUCK
DOUGLAS
New Richmond
Dunningville
Fennville
Ganges
Mill Grove
Kellogg
Martin
Hooper
Otsego
PLAINWELL
Monterey
Pearl
Belknap
Glenn
Chicora
Crooked Lake
Mutchin L.
Quimont L.
Eagle L.
Base Line L.
Duck L.
Silver L.
Osiernout L.
Pine L.
Gun L.
Green L.

FILLMORE
LAKETOWN T.4N.R.16W.
T.4N.R.15W.
OVERISEL T.4N.R.14W.
SALEM T.4N.R.13W.
DORR T.4N.R.12W.
LEIGHTON T.4N.R.11W.
SAUGATUCK T.3N.R.16W.
MANLIUS T.3N.R.15W.
HEATH T.3N.R.14W.
MONTEREY T.3N.R.13W.
HOPKINS T.3N.R.12W.
WAYLAND T.3N.R.11W.
GANGES T.2N.R.16W.
CLYDE T.2N.R.15W.
VALLEY T.2N.R.14W.
ALLEGAN T.2N.R.13W.
WATSON T.2N.R.12W.
MARTIN T.2N.R.11W.
CHESHIRE T.1N.R.14W.
ROWBRIDGE T.1N.R.13W.
OTSEGO T.1N.R.12W.
GUN PLAIN T.1N.R.11W.

109 — 385 T.285 D.41 — 4648 T.308 D.24 — 4675 T.281 D.39
647 T.310 D.0 — 4748 T.298 D.25 — 928 T.302 D.20 — 963 T.322 D.32
4249 T.309 D.
4716 T.290 D.50
5020 T.256 D.41
4723 T.269 D.37
4936 T.259 D.27
4981 T.276 D.93
4956 T.312 D.3
4957 T.259 D.42
4806 T.258 D.40
4913 T.?
2269 T.257 D.32
3243 T.
4?? T.230
4757 T.
3430 T.252 D.30
4429 T.329
1985
4089 T.238 D.42
5047 D.46
935 T.244 D.34
571 T.235 D.13
4539 T.207 D.46
4639 T.210 D.
4331 T.227 D.22
718 T.232 D.115

400
350
300



GEOLOGICAL SECTION ACROSS ALLEGAN COUNTY

TRAVERSE AND DUNDEE CORRELATIONS

VERTICAL SCALE - FEET

0 100 200 300 400 500

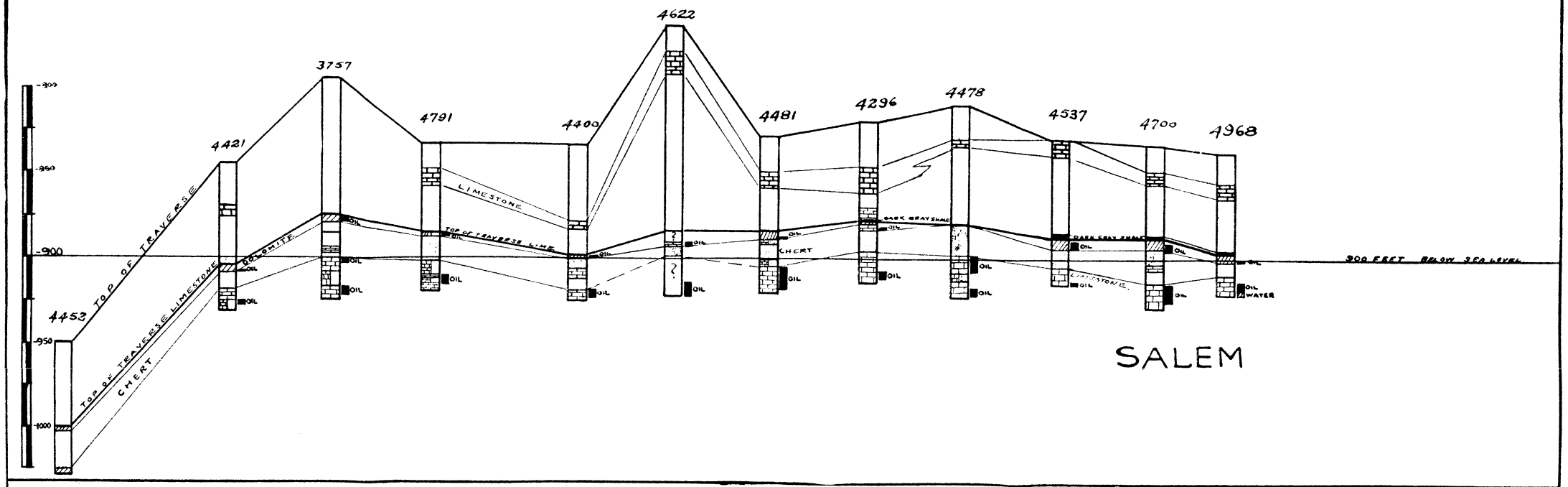
HORIZONTAL SCALE - MILES

0 1 2 3 4 5

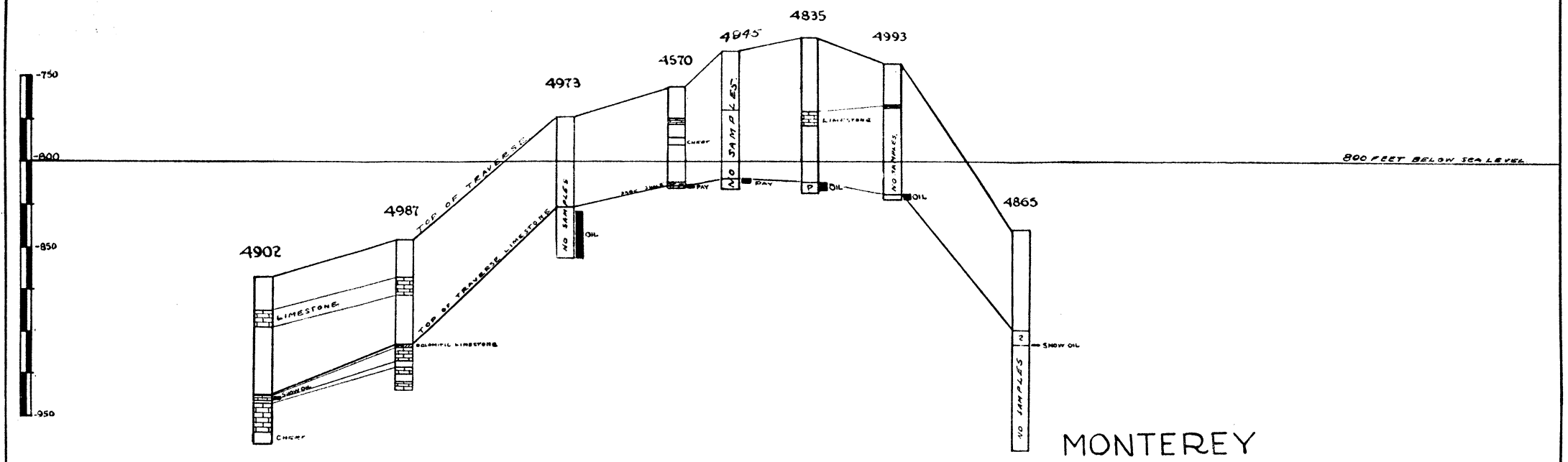
C. H. RIGGS

JUNE 20, 1938

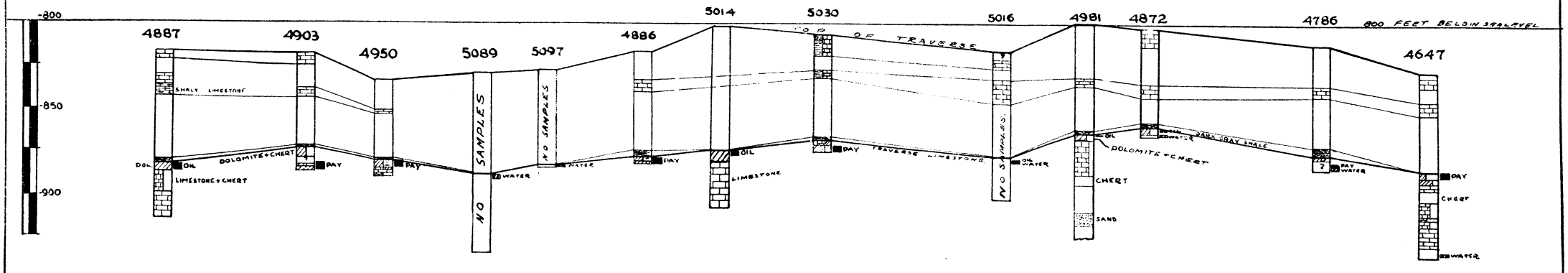
PLATE - II



SALEM



MONTEREY



DORR

DETAILED TRAVERSE SECTIONS

NORTHWEST-SOUTHEAST ACROSS SALEM, MONTEREY AND DORR OIL FIELDS.

SCALE

ONE MILE

0 1/4 1/2 3/4 1

C. H. RIGGS

PLATE - 12

JULY 18 1938

FORMATION TOPS, OIL, GAS AND WATER ZONES AND CASING IN ALLEGAN COUNTY WELLS

By Townships

Permit	Company, Well and Location	Elev.	Drft.	Redrock	Trav.	Lime	Oil	Water	Dund.	Oil	D.R.Water	Sylv.	B.I.	T.D.	10"	8¼"	6-5"	5-3"
	T.2N. - Allegan Township - 13W.																	
None	Allegan G.O.& Min. SE NW 28	632	*120	*580-615	*1195	*1260	1264	1264						1400				
None	Allegan " 2 SW SW 21						1328											
None	Allegan " 3 NW SE 21						None							1411				
None	Northern-Thomas #1 SE NE 32	698	355	650-60	1270	1318	1320							1388				
None	Northern-Moore #2 SE SW 21	630	87	630-40	1220	1287	1287	1292						1340				
4914	LaBlanc-Schafer #1 NW NE 2	734	205	*824-38	*1500	*1564		1564	*1796			1747		1825		208		1528
1160	Irvine-Allegan #1 SW NE 28	631	100	560-85	1199	1232	1295	1300						1367	100		1271	
1035	Manion-Tobin #2 NW SE 16	739	260	765-67	*1377	*1430	1430	1435		1570				1669	272			
3430	R.Sapp-Hudson #1 NE SW 29	711	400	662	*1295	*1348	1398	1355	*1580	1695	*1610	1712	*1825 *1857	1875	400	800		1820
4429	Andrews-Perrigo #1 NE NW 28	621	*130	*613-20	*1209	*1273	1271	1577	*1502		*1532	1600		1600	156	350	1209	
4550	Vahue-Chadbourne SE NE 28	621	110	*600-07	1145	*1270	1274	1276						1475	106		1325	
4089	Champion-Detling SE SE 35	744	327	800-15	*1385	*1457	1457	1653	*1676	1718	*1718	1630		1753	120	327	1400	
	T.1N. -Cheshire Township - R.14W.																	
571	Kimmell-Hamilton NE SW 5	684	365	*627-40	*1236	*1290		1290	*1525		*1540	1575	*1685	1800	227	457	1675	
4938	Hubbell Oil-Kage NW NE 24	731	*200	*660-78	*1258	*1317	1427	1442						1446	120	250	1270	
5071	McIntosh-Shantz NW NE 14	710	267	659-72	1270	1326	1330	1330						1449	267		1326	

*Tops from Sample Examination

FORMATION TOPS, OIL, GAS AND WATER ZONES AND CASING IN ALLEGAN COUNTY WELLS

By Townships

Per-mit	Company, Well and Location	Elev.	Drft.	Marshall	Redrock	Trav.	Lime	Oil	Water	Dund.	D.R.	Water	T.D.	10"	8¼"	6-5"
	T.4N., - Dorr Township - R.12W.															
3823	Caldwell-Goslin #1 NW SE 10	729	160	160-240	1037-47	1646	1701		1780				1828	214		1680
5020	Gordon-Bank NW SE 17	685	120	120-30	912-34	*1535	*1598	1601	1602	1858	*1900	1620	1933		150	400 (5-3" 1557)
4723	Lenoran-Delegowski NW SW 22	698	121	121-28	*935-50	*1552	*1609	1430	1791	*1848	*1915	1901	1936	129	270	1847
1956	Pure Oil-Beukema SW SW 27	714	111	111-132	944-58	1540	*1600		1610		*1912	1823	1954	138	436	1912 (5" 1581)
4727	Eureka-Widenfeller NW SW 29	738	*220	None	*945-51	1550	1617	1623					1626	154	170	239 (5-3" 1891)
4896	Gulf-Widenfeller SW NW 29	720	225		*925-37	*1531	*1594	1610	1629	*1858	1895	1915	1932	222		1564
4903	Leonard-Bachman SW NE 30	697	*164	None	*900-10	1515	*1570	1578					1584	173	256	(5" 1536)
4887	Swanson-Rucinski NE NW 30	684			885-94	*1501	*1566	1568	1567				1600	148	302	1566
4916	Regal Dutch-Commons SE SW 32	740	193		953-65	*1647							1724	196	335	
4872	Lentz & Miller-Troike NE NW 33	758	90	90-155	*960-79	*1559	*1617	1619	1622				1622	101	221	(5" 1586)
4981	Musk. Dev.-Fritza NW NW 33	748	*134	*134-55	*940-60	*1546	*1611	1612	1613	*1887	*1921	1894 2015	2061	145	375	1569
4786	Lentz-Malleck SE NE 33	729	215		*945-75	*1540	*1605	1609	1611				1613	215	300	(5-3" 1510)
4647	Lentz-Hitzler NW SW 34	748	*238		*965-80	*1575	*1633	1635	1680				1683	246	310	1628
5129	Fleming-Niemczyk NW NE 31	712	185	None	924-40	1512	1616	1618	1620				1650		207	
5198	Michigan-Kubiac #1 NW NW 31	671			902-10	1515	1575	1576	1578				1588	168	326	

*Tops from Sample Examination

Permit	Company, Well and Location	Elev.	Drft.	Marshall	Redrock	Trav.Lime	Oil		Water	T.D.	10"	8¼"	6-5"	5-3"
					T.3N. - Monterey Township - R.13W.									
5026	Hughes-Cram #1 SE SW #1	739	175	175-260	1055-75	*1665	*1710		*1710	1729	175	340	1581	
4935	Lee Brown-Spray SW SE 3	703	115	115-150	895-920	*1616	*1670	1670		1730	160	340	1582	
5106	Diamond Springs-Jones SE SW 4	705	122	122-138	873-902	1580	1622		1640	1651	158			
4979	Murley-Schmidt #1 SW SW 5	701	*104	*104-209	*937-951	*1578	*1638	1639	1639	1641	128	258	1611	
4991	Wicklund-State L -#1 NE SE 5	698	*160	*160-198	962-980					1250	114	260		
4944	Norton Stewart-Boehn SE NW 8	734	67	67-195	*936-945	*1593	*1655			1708		200	1058	
4842	M. D. C. - Miller NE SE 8	766	*196	None	*912-922	*1580	*1629	1629		1632	194	313	1588	
4973	Hood O&G.-Wright #3 NW SW 9	799	219	None	920-928	*1575	1629	1628		1656	219		1626	
4921	Musk. Dev.-Swanders #2 SE SW 9	818	124	124-187	*936-956	*1576	*1641	1642		1667	203	285	1627	
4988	Sprenger-Brenner #1 SE NE 10	753	124	124-165						197	136	195		
4949	Stewart Oil-Watkins NW NW 15	824	190	190-266	1010-35	*1718	*1773	*1775	1808	1808		209	400	
4792	Sprenger Bros.-Miller SE SE 15	863	270	None	*1061-80	*1675	*1736	1736	1738	1743	288	341	755	
4835	McIntosh-Dalrymple NW NW 16	824	163	163-173	937-949	*1552	1635	1636		1642	179	309	1633	
4865	R. E. Olds-Ryk Riksen SE NW 16	870	219	None	1020-50	1710	1772	1778	1835	1840	219	320	350	
4251	Swanson Cons.-Granger SW NE 17	847		None	*936-946	1616	1728		1760	1790	230		1691	
4904	W.E.Ross-Skinner #1 NW NE 17	782	232		*875-887	1552	*1640	1645		1649	233	280		1597
4878	Voorhees-Wuis #1 NE NE 21	917	*340	None	*1090-1118	*1754	*1820	1821		1935		352		1823
4913	Sprenger Bros.-Buck SW SE 22	824	200	None	*934-946	*1562	*1622	1621	1641	1680	208		621	1603
4924	Caldwell-Dendel #1 SE SW 27	925	328	None	1000-30	1703	1785	1787	1857	1865	328	735	1746	

Permit	Company, Well and Location	Elev.	Drft.	Marshall	Redrock	Trav.	Lime	Oil	Wat.	Dund.	Wat.	D.R.	T.D.	10"	8¼"	6-5"	5-3"
							T.4N., -Salem Township - R.13W.										
4455	Bangs Hirzel-Palmbos NE SE 4	718	294	*294-306	*1055-80	*1713	*1761		1763				1808	294	400		
4552	Regal-Campaigner SW NE 7	666	*100	*100-205	*882-904	*1542	*1586		1603				1604	116	206	1577	
4351	Victor McB-Harmsen SE NW 8	694	121	121-296	1028-58	*1688							1716	123	321		
4452	Eureka-Flesser SE SE 8	713	*190	*190-265	*1090-23	*1662	*1712		1810				1820	180	295		
963	Nat.Min.-Commissaris NE NE 9	712	151	151-191	940-53	*1550	*1600	1605	1614	*1928	1860	*1960	1968	151	465	1743	
3038	Pioneer Dev. " SW NE 9	710	*176	*176-203	*947-58	*1606	*1654	1655	1685				1688		183	298	1572
4425	Wicklund-Winchester SW NW 13	668	150	None	930-42	*1567	*1633		1698				1745	129	270	1596	
4558	Ross-Bredewig SW SW 15	679	131	None	858	*1511	1585	1587					1635	131	328		
4399	Mich.D.Co.-F.Smith SW SW 15	651		None	802-37	1478	1527	1534					1569	209	248	1504	
4243	Kreiser-Moored #1 NE SE 16	700	80	80-130	900-	*1575	*1632		1664	*1935			1950	90	150	1675	
4757	Salem Oil-Rabb #1 SW NW 16	687	107	None	*876-96	*1480	*1560	1561	1608				1610	123	220		1490
4324	Lentz & Miller-Sebright NW SW 16 #2	683	150	None	846-65	1485	1554	1564					1601	159		1555	
4140	Musk.Oil-Berens #1 NE SW 17	675	*110	*110-132	882-92	*1530	*1600	1605	1625				1649	132		1561	
4746	Mich.Dev.-Sebright #2 SE SE 17	670	90	None	831-49	1510	1580	1595		*1870	1946	*1929	2000	90	216	1536	
4587	Ide O.& G.-Brenner #2 NE NE 17	720	208	None	922-45	1580	1644	1644	1662				1695	226		1597	
4273	Ypsilanti-Englesman SW SE 18	681	112	None	893-916	*1637	*1698		1704				1705	104	148		
4898	Regal Dutch-Lampen NE NE 20	686	85	None	847-54	1540	*1617	1623					1635	103		1583	
4213	Cochran-Nieneker NW NW 21	665	109	None	825-40	1524	1623	1629	1629				1640	109		1536	
4234	Vahue-Hoppenrath SW SE 21	653	54	*54-82	*835-65	*1510	*1595	1595	1595				1597	74	106	1555	

*Tops from sample examination

Permit	Company, well and location	Elev.	Drft.	Marshall	Redrock	Trav.	Lime	Oil	Wat.	Dund.	Wat.	D.R.	T.D.	10"	8¼"	6-5"	5-3"
	T.4N. - Salem Township - R.13W.																
4642	Lima Oil-Nahr #1 SE NW 22	667	174	None	855-59	*1500	*1576		1578				1602	173	302	1538	
4968	Musk.-Oil-Ostrander NW SW 22	662	80	80-105	860-74	1505	*1559	1562					1584	80	150	1527	
5003	Alma Allen-Howard NW NE 24	668	118	118-137	878-908	1525	1591	1591					1692	138		1592	
5044	Mesel-Mellish #1 NE SW 25	681	246	246-50	915-19	1580	1647	1649	1651				1651		248	253	1609
4585	Northcott-Dowling NE SW 27	653	167	167-195	968-975								1550	100	166	267	
4417	Heinig-Kleinbrink NW NE 29	637	*150	None	*875-900	*1560	1637		1641				1641	135	150		1570
5188	Gordon-Perkins SW SW 31	646			770-80	1403	1459	1460					1462		95		1434
5233	Gilde-Lampen NE NW 32	655			908-38	1585	1644		1645				1650	140	230		
	T.1N. - Trowbridge Township - R.13W.																
4760	Dapar-Kent SE SW 4	733	388		*720-30	*1310	*1369	1373	1375				1404	100	387	451	
4283	Hubbell-Madalinski NE SW 18	744	254		660-80	*1280	*1338	1341	1341				1387	255		1280	
4539	Springer-McCarn NE NW 19	731	275		665-70	*1260	*1314	1321	1485	*1521	1611	*1567	1645	135	350	1335	
4531	Copley-Odell NW SW 20	773	342		690-95	*1300	*1358	1355	1357				1412	290	342	1310	
1107	Johnson-Holland SW SW 26	755	190		731								731	190			
4661	Gladstone-Emmons NE NE 28	749	205		*689-93	*1299	*1348	1351	1352				1369	206	399	1345	

(Carried forward)

Permit	Company, Well, and Location	Elev.	Drft.	Marshall	Redrock	Trav.	Lime	Oil	Wat.	Dund.	Wat.	D.R.	Sylv.	T.D.	10"	8¼"	6-5"	5-3"
							T.1N. - Trowbridge Township - R.13W. (forward)											
4350	Flannigan-Brown NE NE 29	803	*185		*780-83	*1338	1386	1389	1391					1391	221	304	1388	
4442	Rose-Bartholoman NW NW 28	749	250		690-700	*1273	1337	1337	1338					1345	250	352	1320	
4639	Flannigan-Bridgeman SW NW 29	764	265		700-10	*1280	1335	1337	1503	*1545		1612		1624	274		1341	1586
1121	Johnson-Forster NE NW 32	758	204		705-18	1280	1348	1349	1555					1557	214			1507
							T.2N. - Valley Township - R.14W.											
None	Shell Test K-310 NW SW 18	668	255		640-55									748				
4757	Vahue-Merrill & V. NE SE 25	752	?		720-730	*1330	*1393	1392	1442	?		1875	*1660	*1818	1929	173	256	1817
4349	Arlon-Barnicle NE SW 33	685	113		640-55	1251	1310	1335	1339					1381	113	283		
							T.2N. - Watson Township - R.12W.											
4999	Borough-Cavanaugh NE NE 5	849			*1089-95	*1748	*1811		1814					1903		226	689	1739
5047	Rose & Jones Alma SE SE 32	707			760-80	1379	1484	1484		*1657		1730	*1703	1735	305			1406
							T.3N. - Wayland Township - R.11W.											
5027	Wayland-Carpenter SE NE 7	760			*1035-70	*1658	*1729			*1988		2064	*2030	2064	162	300		
5028	Fowler-Birchard NW SE 20	880	298	*298-400	*1277-92	1840	1903		1904					1956		296	625	
4861	Wayland Synd.-Kline SW SE 10	784	198	*198-354										630		188		

Permit	Company, Well and location	Elev.	Drft.	Redrock	Trav.	Lime	Oil	Wat.	Dund.	D.R.	Wat.	Sylv.	B.I.	T.D.	10"	8¼"	6-5"	5-3"
	T.4N. - Fillmore Township - R.15W.																	
	Shell Test K-302 SE SW 10	678	115	785-812										878				
	Shell Test K-304 NE NW 3	672	180	*787-800										845				
	T.1N. - Gun Plains Township - R.11W.																	
718	Wiser Oil-Humphrey NW NW 21	728	130	*845-60	*1375	1450	1725	1600	*1682	*1697	1726			2010	130	425	1846	
5051	Henry Honeysette SW NE 27	861		970-80	1435	1512		1582						1770		285	1477	
872	Wiser Oil-Allen NE NE 33	733	382	875-90	1405	1455	1610	1585		1685	1715			1715	169	190	381	
	T.3N. - Heath Township - R.13W.																	
5196	Gordon-Scholten NW NE 1	646	80	740-50	1385	1445	1445							1448		94	135	1431
5064	Sutherland-Klein NW SW 10	673		735-52	1465	1523	1528	1554						1567	133	264	1490	
2243	Bear Creek-Fors 1 NE SE 29	650	157	*655-700	*1327	1400	1400	1400		1650	1750			1950	158	300	1547	
4674	Heinig-Lundberg SW NE 29	667	186	*695-714	1343	*1398	1402							1500	185		1361	
	Sinclair-Gerber NE SW 30	602	305	510-35										1200	80	180		
2629	Heath-Terpstra NW SE 34	676	*80	726-44	*1371	*1414		1567	*1661	*1693		*1952	*1968	2121	196	283	2060	
	T.3N. - Hokpins Township - R.12W																	
4485	L.& M.-Morgenstein NW SW 1	730	*144	1153-68	*1740	*1800		1798		(Mar.144-315)				1808	144	336	1760	
886	Puritan Oil-Gere NW NW 13	731	*140	1125-35	*1720	*1790	1927		*2045	*2085	1965	(M.190-285)		2115	139	470	1927	
5025	L.Chulski-Tuttle 1 NE SE 22	737	124	1050-65	1650	1720	1727	1729		(Mar.124-230)				1729		245	1682	
4715	Stallard-Schaffer NW NW 29	715	242	*885-92	*1500	*1549	1775	1551			1850			1850	208		1524	

Permit	Company, well and Location	Elev.	Drft.	Mar.	Redrock	Trav.Lime	Oil	Wat.	Dund.	D.R.	Wat.	Sylv.	B.I.	T.D.	10"	8¼"	6-5"	5-3"
					T.4N. - Laketown Township - R.16W.													
647	E. Shore-Dewitt SE SW 11	661	193		*623-40	*1340	*1422 1614 1465			*1732	2050	*1922	*2042	2056	192		1900	
4586	Cochran-Arnold SW NW 26	708	150		685-705	*1420	*1444 1462							1464	167	260		
					T.1N. - Lee Township - R.14W.													
5096	United Pet.Co.-Low SW SW 24	675	235		*545-60	1103	1161							1295	235			
					T.2N. - Martin Township - R.11W.													
935	East Shore-Nyland NW NE 26	742	208		*960-80	*1600	*1656				*1900	*1934	1992	2000	208	500		
5102	Hubbell Oil-McVean SW NW 19	832			1000-20	1556	1635 1635 1656							1860	314		1573	
					T.1N. - Otsego Township - R.12W.													
2479	Crystal Syn.-Jewell NW NE 3	753			*840-65	*1449	*1512 1512							1545		172	1407	
4088	Miller Cook-Wood SE SW 3	746	189		860-90	1435	1498 1504 1680							1753		224		1501
4331	Champion-Young NW NE 26	714	300		760-75	*1325	*1390 1423	*1617	*1639	1690				1804	285	375	1651	
					T.4N. - Overisel Township - R.14W.													
928	Pure Oil-Hoeve NE SE 2	676	93	93-130	857-75	*1500	*1573 1624	*1875	*1895	1912	*2273	*2278		2600	150	(14" 94') 1899	2191	
2786	Venderleest-Berens SE SE 26	670	72	72-85	*820-50	1550	*1598 1601							1602	73	102		
4748	Carscallen-Van Dam NW SW 3	651	142		763-87	*1412	*1510 1684	*1800	*1825					1940	142		1510	
5127	Wm.Cline-Aldrich SW SE 36	645	108	108-10	746-63	1405	1460 1461							1461	112		1441	
5199	Stewart-Oldbekking SE SE 21	656	152		762-69	1410	1477 1477							1478		160	1426	
5224	Trexler-Yonkers SW SE 25	631	150		723-37	1482	1562 1571							1571	172			
5181	Cline-Pol NE SE 35	626			774-94	1444	1503 1544							1547	109		1468	