

TIE WELL E-E'

BERENERGY CORP.
NO. 1 STUBBE
SWNW SEC. 34, T.37 N., R.58 E.
SHERIDAN COUNTY
MONTANA

NDGS NO. 10230
THE LOUISIANA LAND &
EXPLORATION CO.
NO. 11-24 BORGEN
NWNW SEC. 24, T.163 N., R.99 W.
DIVIDE COUNTY

NDGS NO. 9472
STONE PETROLEUM CORP.
NO. 14-29 FEDERAL LAND BANK
SWSW SEC. 29, T.162 N., R.95 W.
DIVIDE COUNTY

NDGS NO. 6607
NORTH CENTRAL OIL CORP.
NO. 1 PRIEBE - STATE
NENE SEC. 5, T.161 N., R.94 W.
BURKE COUNTY

NDGS NO. 6802
BWAB
NO. 24-12 WESTERN INVESTMENT CO.
SWNW SEC. 24, T.160 N., R.93 W.
BURKE COUNTY

NDGS NO. 8893
MONSANTO CO.
NO. 1 MELBY
SWSW SEC. 8, T.162 N., R.89 W.
BURKE COUNTY

27.4 MILES

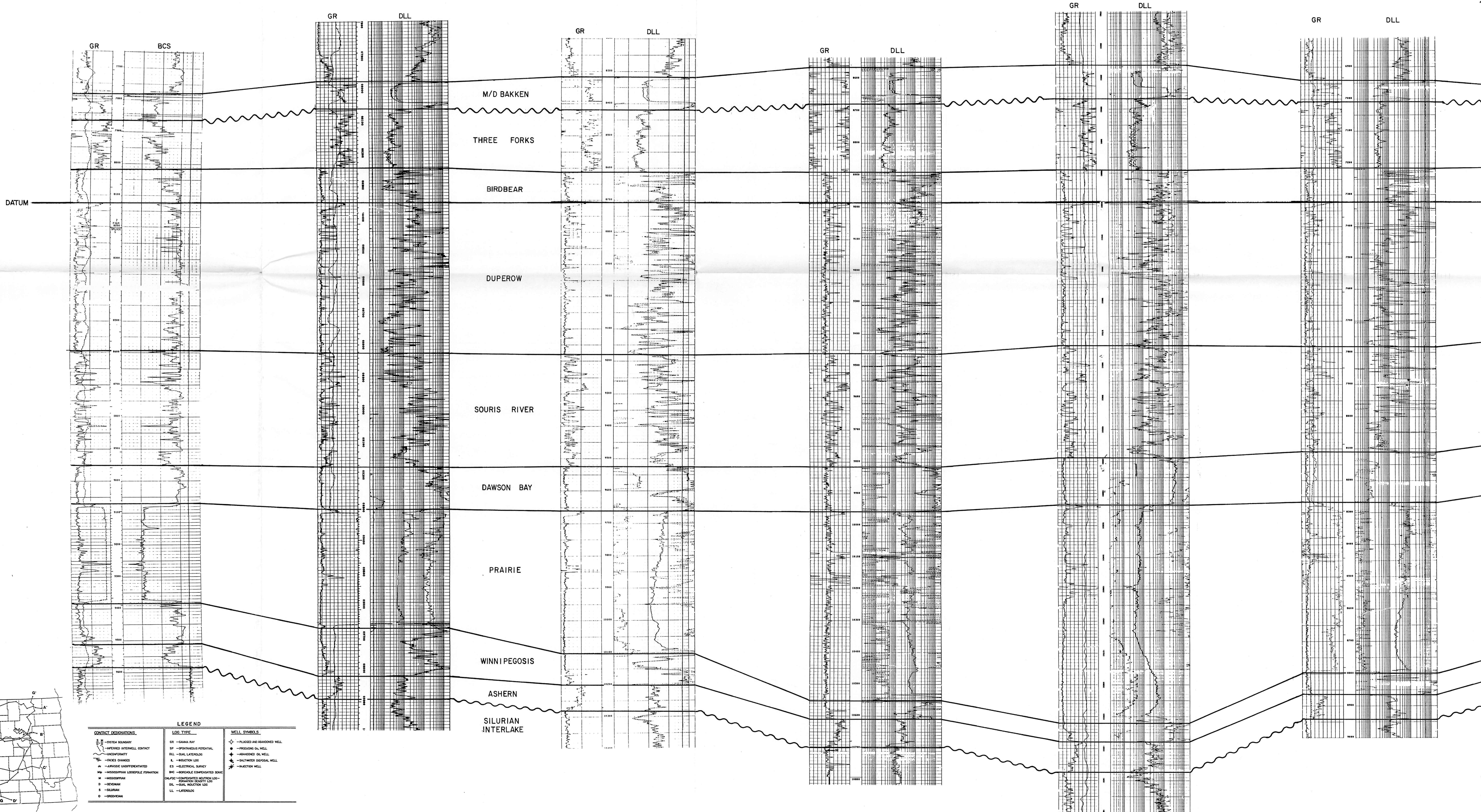
20.8 MILES

6.0 MILES

13.8 MILES

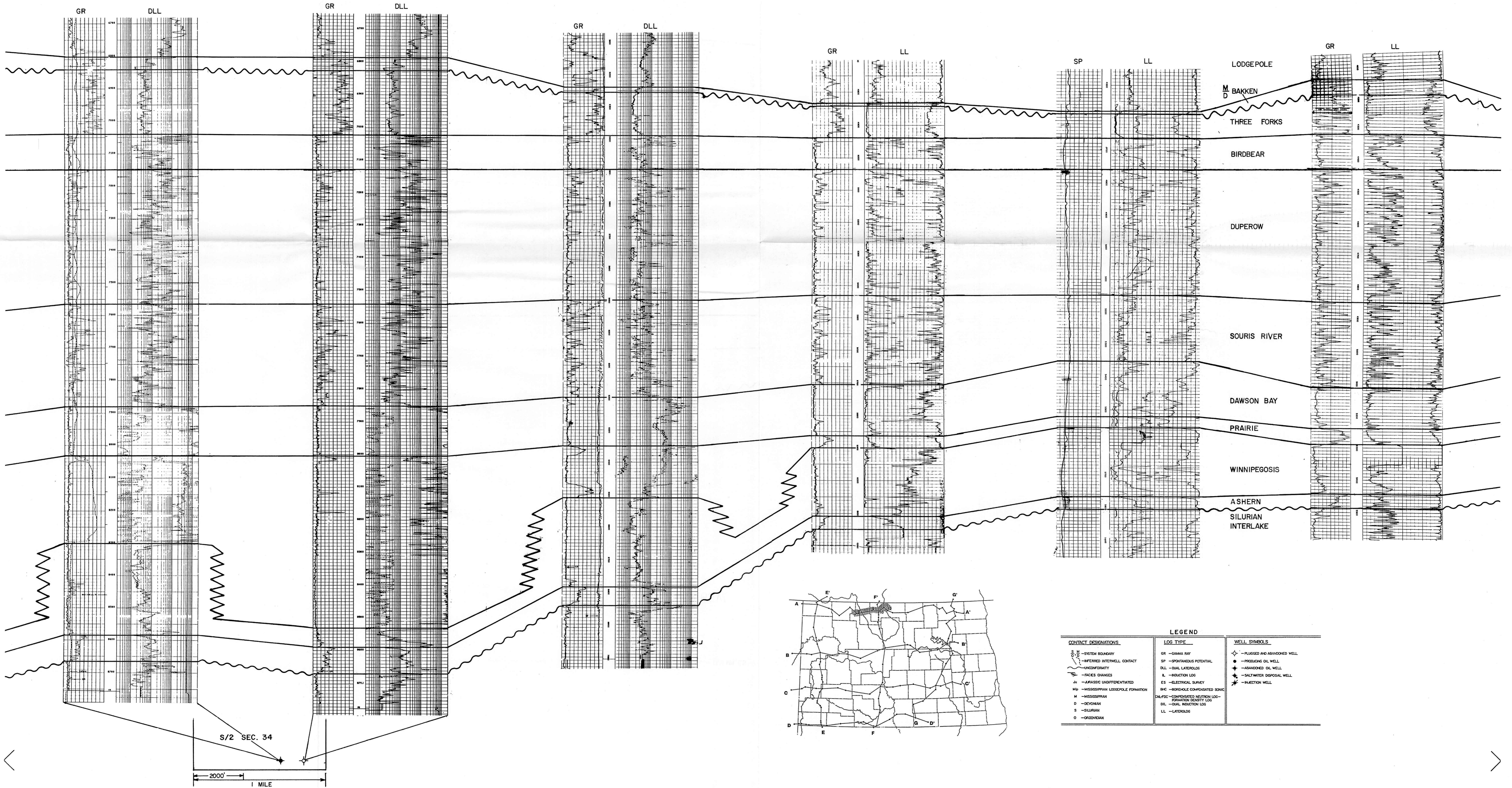
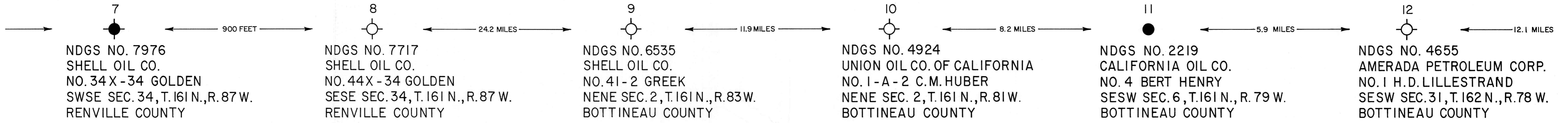
22.2 MILES

17.1 MILES

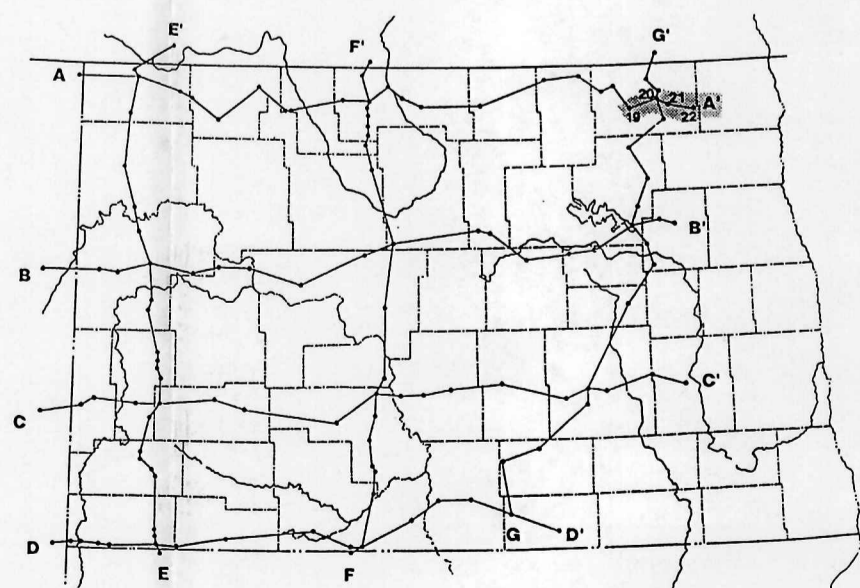
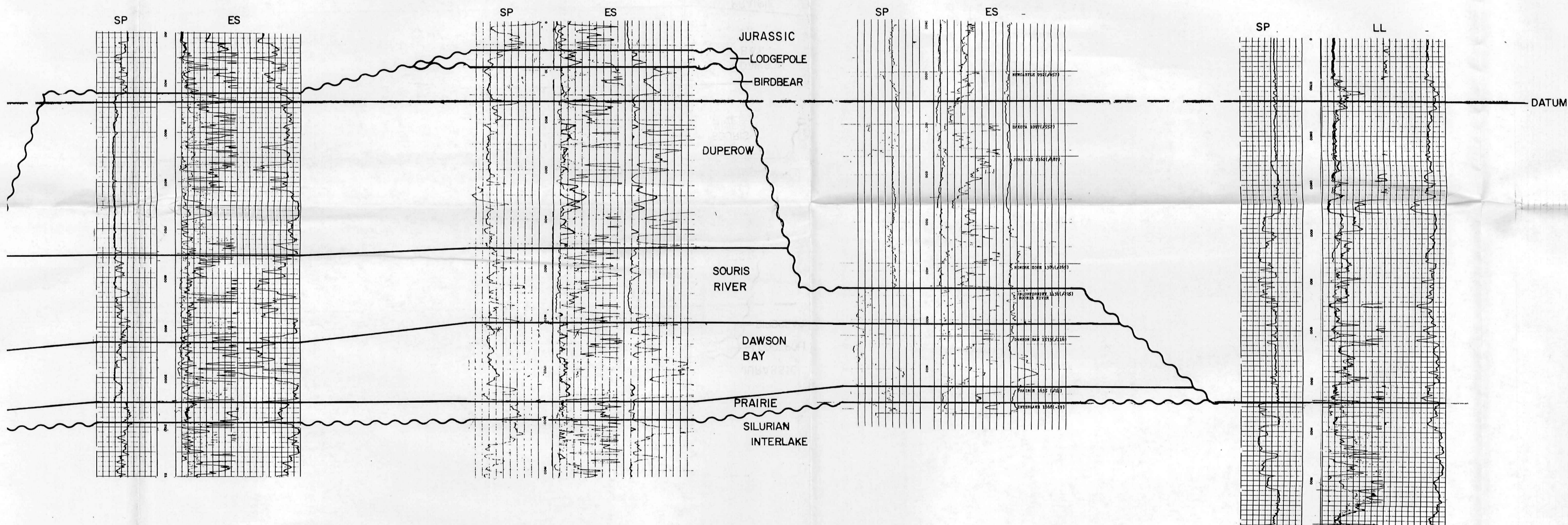
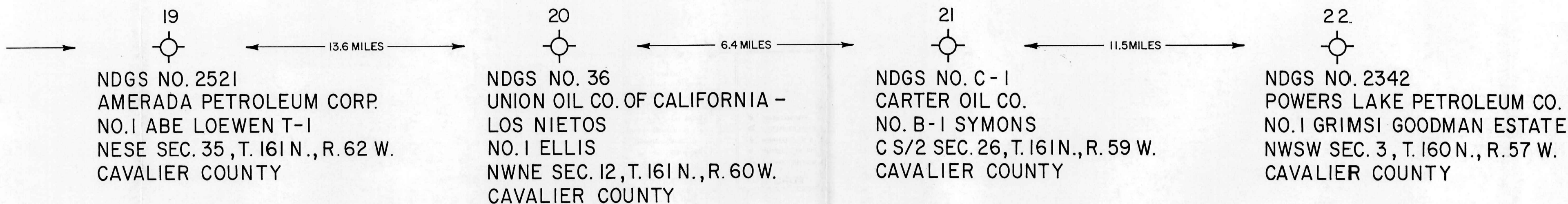


LOG TYPE		WELL SYMBOLS	
GR	GRABER	○	PLUGGED AND ABANDONED WELL
BCS	BERNER	●	PRODUCING OIL WELL
DLL	DUAL LOG	◆	ABANDONED OIL WELL
DL	DUAL LOG	⬇	SALTWATER DISPOSAL WELL
AL	ACTIVITY LOG	⬆	FUNCTION WELL
EL	ELECTRICAL SURVEY		
BC	BIOPHYSICAL COMPOSITE SURVEY		
DLR	DUAL LOG REACTION LOG		
DL	DUAL LOG		
LL	LITHOLOGICAL		

TIE WELL F-F'



TIE WELL G-G'



LEGEND		
CONTACT DESIGNATIONS	LOG TYPE	WELL SYMBOLS
S-M — SYSTEM BOUNDARY	GR — GAMMA RAY	◊ — PLUGGED AND ABANDONED WELL
SP — INFERRED INTERWELL CONTACT	SP — SPONTANEOUS POTENTIAL	● — PRODUCING OIL WELL
— FACIFORMITY	DL — DUAL LATEROLOG	⊙ — ABANDONED OIL WELL
— FACES CHANGES	L — INDUCTION LOG	⊛ — SALTWATER DISPOSAL WELL
Ju — JURASSIC UNDIFFERENTIATED	ES — ELECTRICAL SURVEY	⊛ — INJECTION WELL
Mp — MISSISSIPPIAN LODGEPOLE FORMATION	BHC — BOREHOLE COMPENSATED SONIC	
M — MISSISSIPPIAN	CM, FDC — COMPENSATED NEUTRON LOG - FORMATION DENSITY LOG	
D — DEVONIAN	OIL — DUAL INDUCTION LOG	
S — SILURIAN	LL — LATEROLOG	
O — ORDOVICIAN		



FLARE ENERGY CORP.
KOHLMAN NO. 10X-2
NWSE SEC. 2, T. 22 N., R. 47 E.
RICHLAND COUNTY, MONTANA

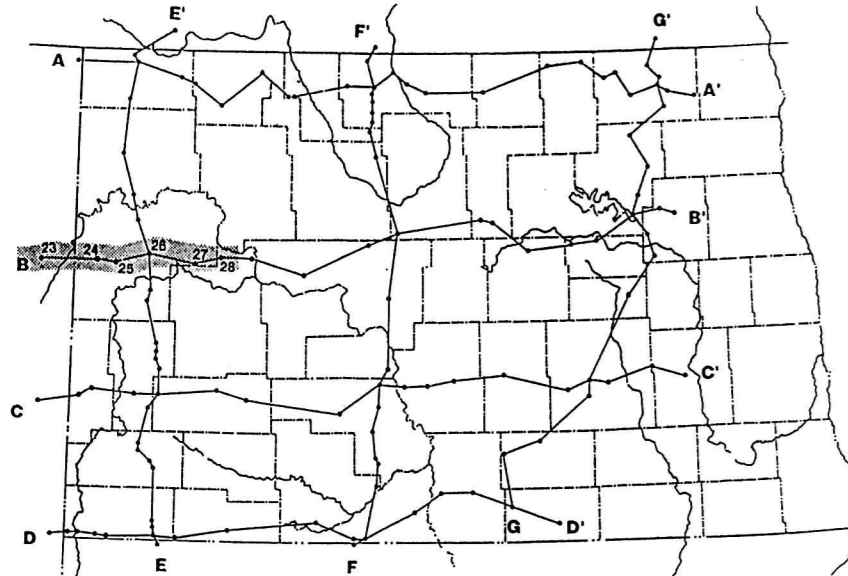
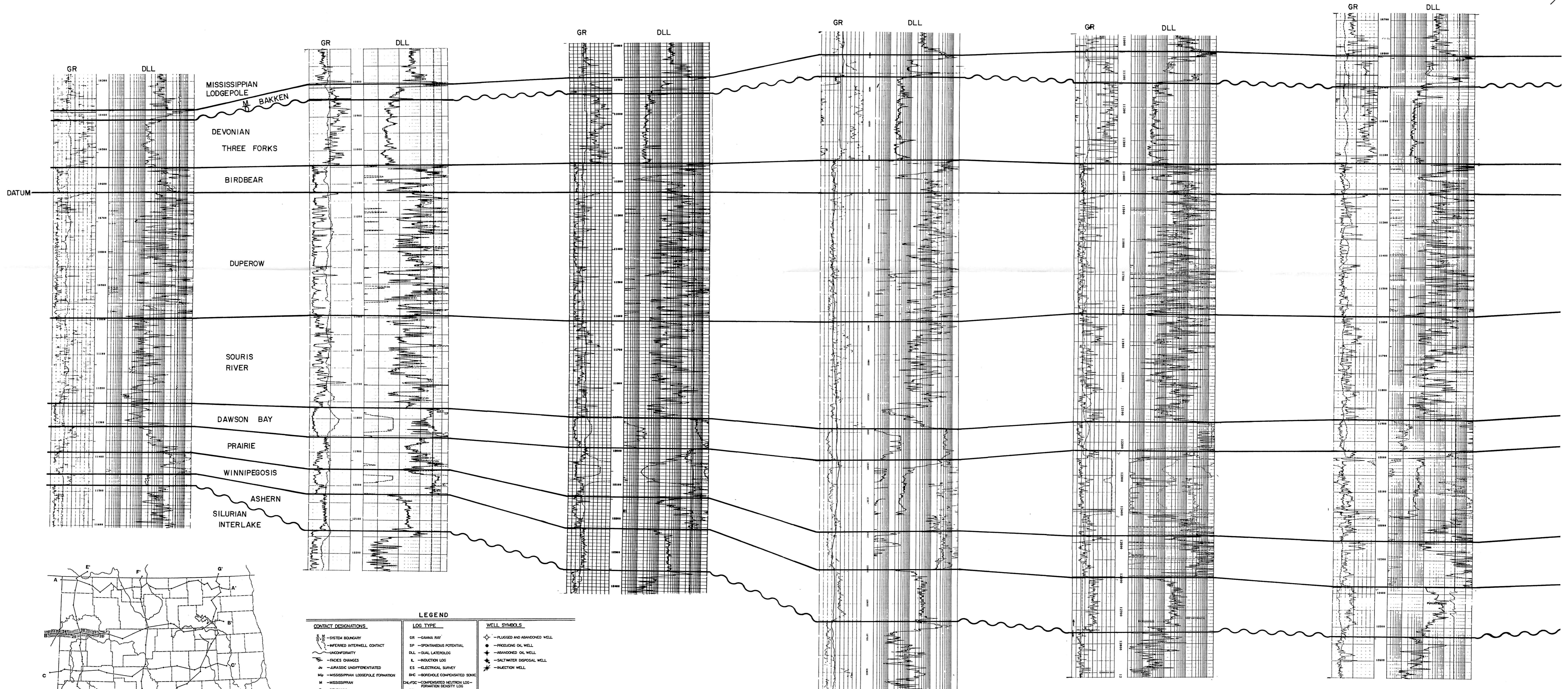
NDGS NO. 8905
PATRICK PETROLEUM
NO. 1-25 HIGHLAND FEDERAL
SWSW SEC. 25, T. 149 N., R. 103 W.
McKENZIE COUNTY

NDGS NO. 8717
GRAHAM ROYALTY, LTD.
NO. 32-7 CHITWOOD
SWNE SEC. 32, T. 149 N., R. 101 W.
McKENZIE COUNTY

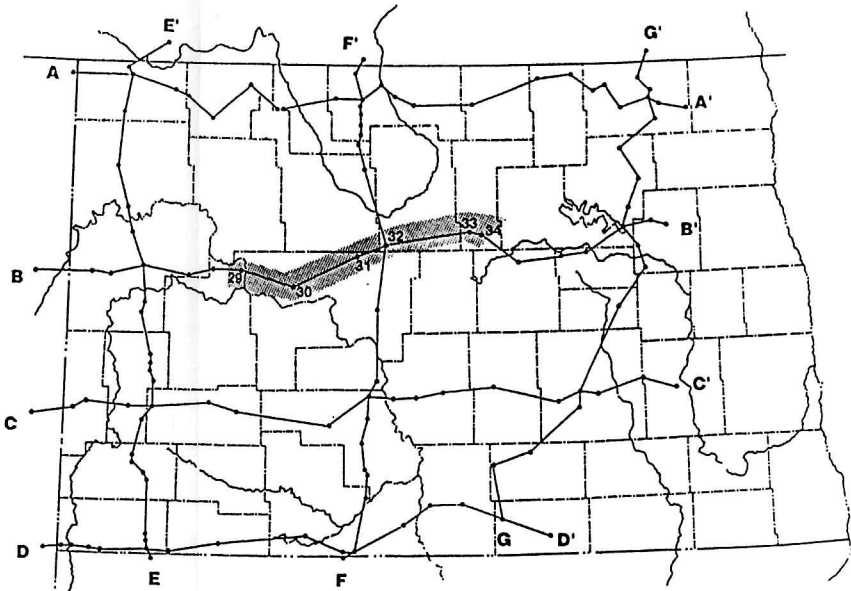
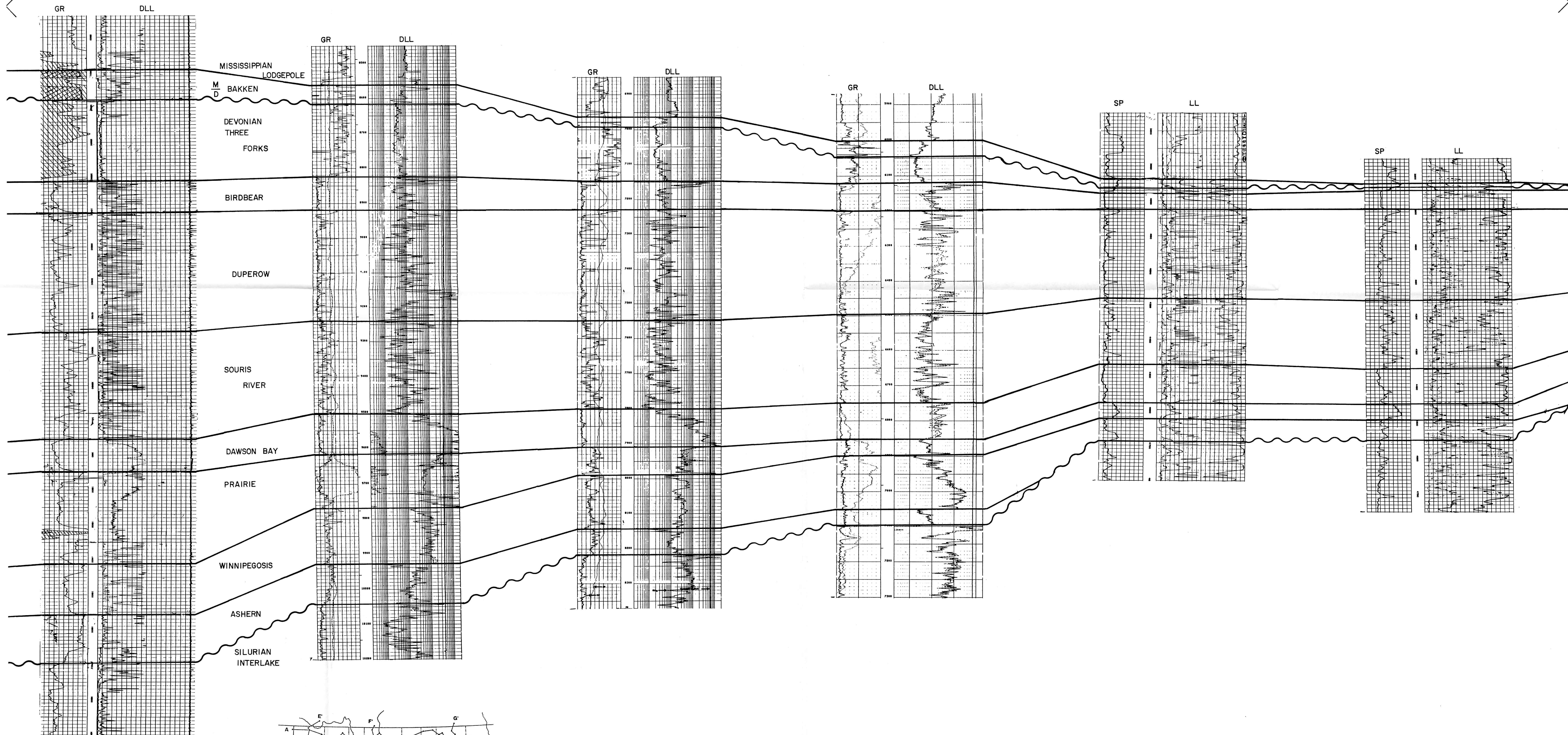
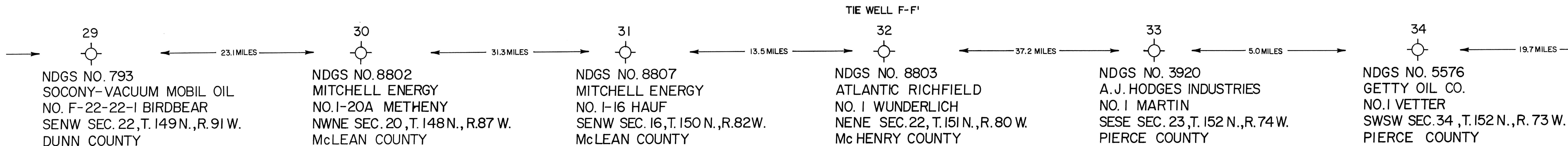
NDGS NO. 5866
KERR-McGEE
NO. 1 PETERSON
NWSW SEC. 11, T. 149 N., R. 99 W.
McKENZIE COUNTY

NDGS NO. 7758
LEAR PETROLEUM
NO. 1 KATRINA
SWNE SEC. 32, T. 149 N., R. 95 W.
McKENZIE COUNTY

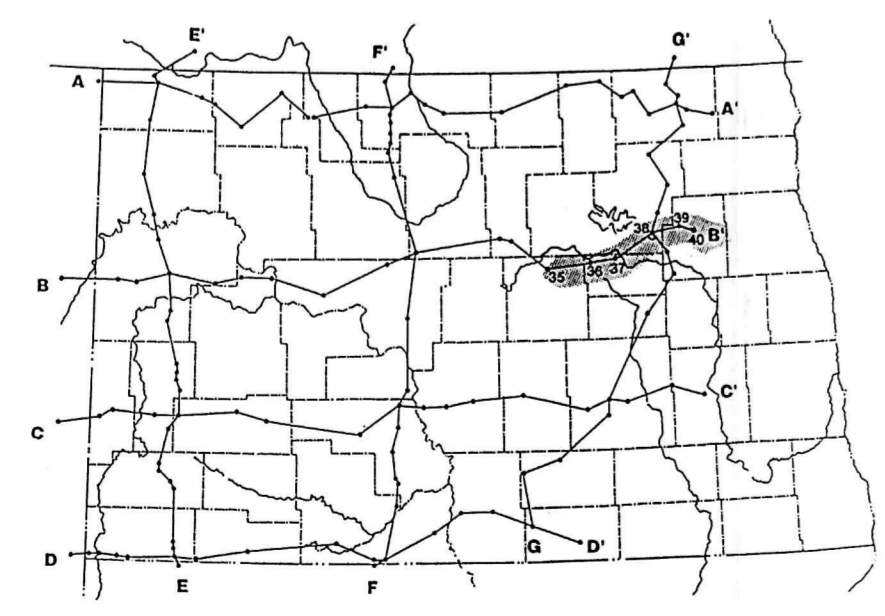
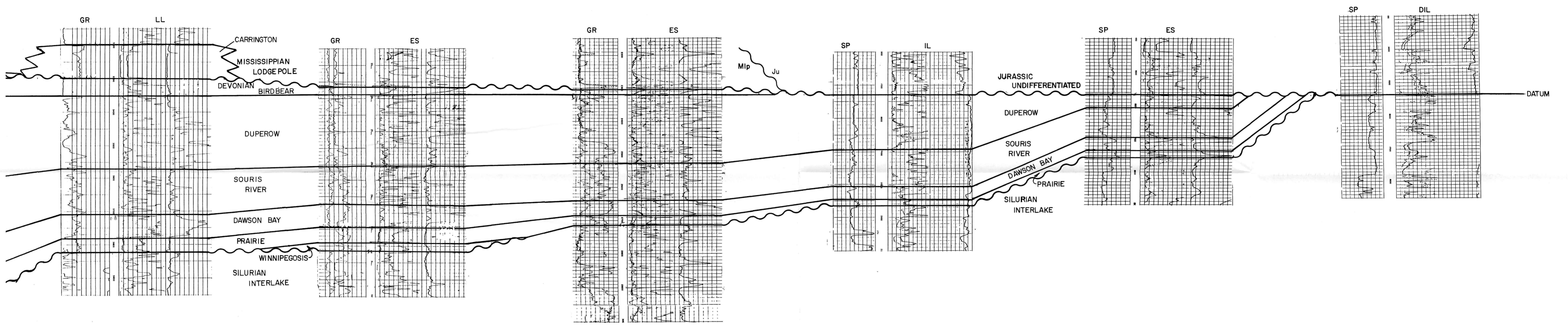
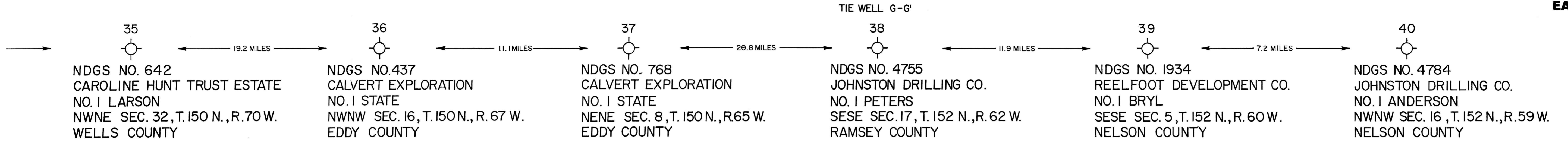
NDGS NO. 8095
SHELL OIL CO.
NO. 12-17 PACKINEAU BIA
SWNW SEC. 17, T. 149 N., R. 93 W.
DUNN COUNTY



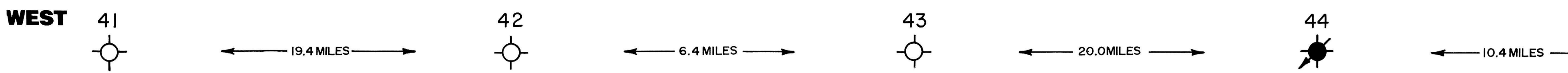
CONTACT DESIGNATIONS		LOG TYPE		WELL SYMBOLS	
—	— SYSTEM BOUNDARY	GR	— GAMMA RAY	⊗	— PLUGGED AND ABANDONED WELL
—	— REFERRED INTERWELL CONTACT	SP	— SPONTANEOUS POTENTIAL	●	— PRODUCING OIL WELL
—	— UNIFORMITY	DLL	— DUAL LATEROLOG	+	— ABANDONED OIL WELL
—	— FACES CHANGES	E	— INDUCTION LOG	⊕	— SALT WATER DISPOSAL WELL
J	— JURASSIC UNDIFFERENTIATED	ES	— ELECTRICAL SURVEY	⊙	— INJECTION WELL
Mp	— MISSISSIPPIAN LODGEPOLE FORMATION	BFC	— BOREHOLE COMPENSATED SONIC		
D	— DEVONIAN	DLFDC	— COMPENSATED NEUTRON LOG—FORMATION DENSITY LOG		
S	— SILURIAN	DIL	— DUAL INDUCTION LOG		
O	— ORDOVICIAN	LL	— LATEROLOG		



LEGEND		
CONTACT DESIGNATIONS	LOG TYPE	WELL SYMBOLS
<ul style="list-style-type: none"> — SYSTEM BOUNDARY — REFERRED INTERWELL CONTACT — UNCONFORMITY — FACIES CHANGES M — ARKANSAS UNDIFFERENTIATED Mp — MISSISSIPPIAN LODGEPOLE FORMATION M — MISSISSIPPIAN D — DEVONIAN S — SILURIAN D — ORDOVICIAN 	<ul style="list-style-type: none"> GR — GAMMA RAY SP — SPONTANEOUS POTENTIAL DLL — DUAL LATEROLOG L — INDUCTION LOG ES — ELECTRICAL SURVEY BHC — BOREHOLE COMPENSATED SONIC DN-FEC — COMPENSATED NEUTRON LOG — FORMATION DENSITY LOG DIL — DUAL INDUCTION LOG LL — LATEROLOG 	<ul style="list-style-type: none"> ◊ — PLUGGED AND ABANDONED WELL ● — PRODUCING OIL WELL ◆ — ABANDONED OIL WELL ⊕ — SALTWATER DISPOSAL WELL ⊖ — INJECTION WELL



LEGEND		
CONTACT DESIGNATIONS	LOG TYPE	WELL SYMBOLS
<ul style="list-style-type: none"> — SYSTEM BOUNDARY — INFERRED INTERWELL CONTACT — UNCONFORMITY — FACIES CHANGES — JURASSIC UNDIFFERENTIATED — MISSISSIPPIAN LODGEPOLE FORMATION — MISSISSIPPIAN — DEVONIAN — SILURIAN — ORDOVICIAN 	<ul style="list-style-type: none"> GR — GAMMA RAY SP — SPONTANEOUS POTENTIAL DLL — DUAL LATERNOLOG IL — INDUCTION LOG ES — ELECTRICAL SURVEY INC — INDEPENDENT COMPENSATED SONIC CHLFC — COMPENSATED NEUTRON LOG — FORMATION DENSITY LOG DIL — DUAL INDUCTION LOG LL — LATERNOLOG 	<ul style="list-style-type: none"> — PLUGGED AND ABANDONED WELL — PRODUCING OIL WELL — ABANDONED OIL WELL — SALT WATER DISPOSAL WELL — INJECTION WELL

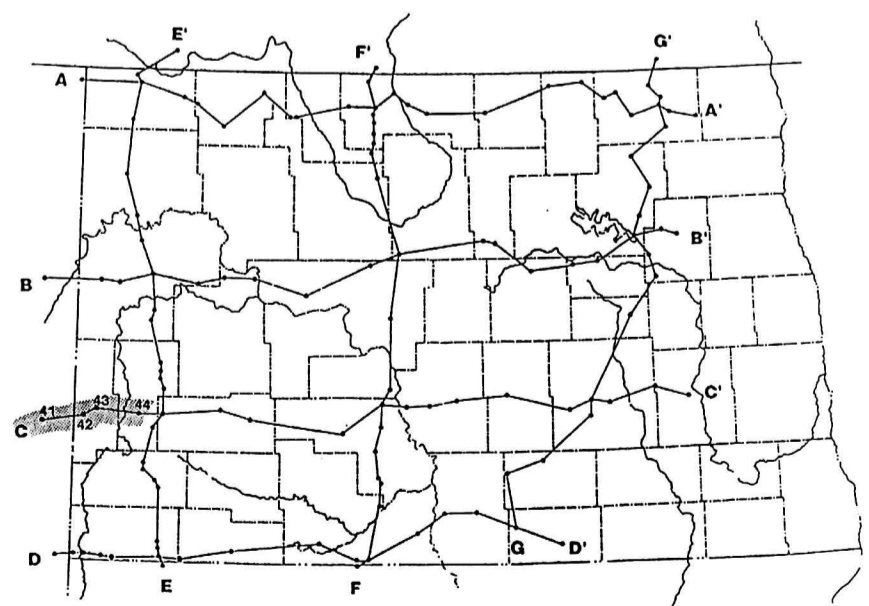
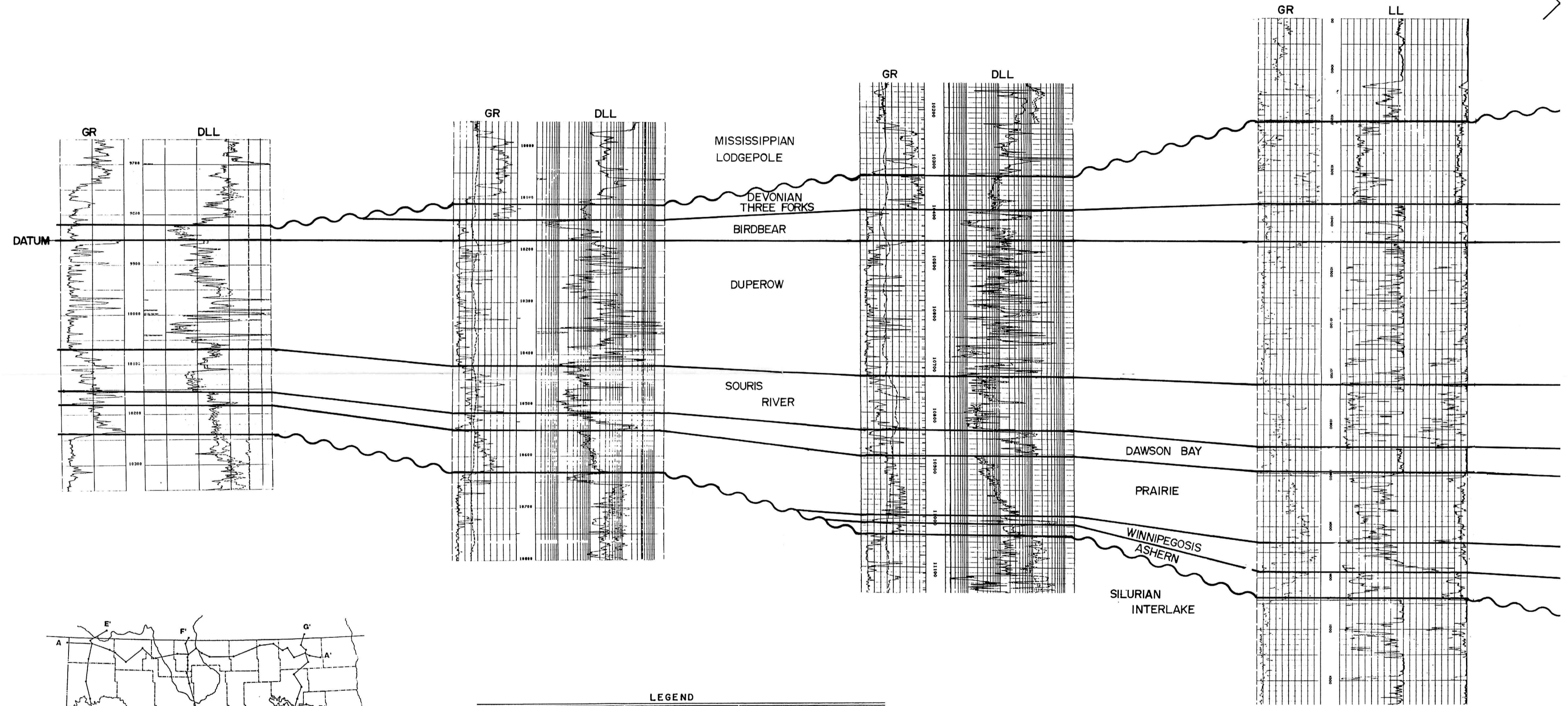


DOME PETROLEUM
DOME SAFSTROM 1-7
NESW SEC. 7, T. 12 N., R. 61 E.
WIBAUX COUNTY

NDGS NO. 9148
HUNT OIL CO.
NO. 1-16 KIPPLEY-STATE
NENE SEC. 16, T. 139 N., R. 105 W.
GOLDEN VALLEY COUNTY

NDGS NO. 9540
MOBIL OIL CORP.
NO. 1 PEARL OLSTAD
NESE SEC. 32, T. 140 N., R. 104 W.
GOLDEN VALLEY COUNTY

NDGS NO. 3268
AMERADA PETROLEUM CORP.
NO. 8 SCORIA UNIT
NESW SEC. 10, T. 139 N., R. 101 W.
BILLINGS COUNTY



CONTACT DESIGNATIONS		LOG TYPE		WELL SYMBOLS	
—	— SYSTEM BOUNDARY	GR	— GAMMA RAY	○	— PLUGGED AND ABANDONED WELL
—	— INFERRED INTERWELL CONTACT	SP	— SPONTANEOUS POTENTIAL	●	— PRODUCING OIL WELL
—	— UNCONFORMITY	DLL	— DUAL LATEROLOG	○	— ABANDONED OIL WELL
—	— FACIES CHANGES	IL	— INDUCTION LOG	★	— SALTWATER DISPOSAL WELL
JU	— JURASSIC UNDIFFERENTIATED	ES	— ELECTRICAL SURVEY	★	— INJECTION WELL
MLP	— MISSISSIPPIAN LODGEPOLE FORMATION	BWC	— BOREHOLE COMPENSATED SONIC		
M	— MISSISSIPPIAN	CN-FDC	— COMPENSATED NEUTRON LOG— FORMATION DENSITY LOG		
D	— DEVONIAN	DIL	— DUAL INDUCTION LOG		
S	— SILURIAN	LL	— LATEROLOG		
O	— ORDOVICIAN				

45



← 27.0 MILES →

NDGS NO. 8098
MONSANTO CO.
NO. 1 FROELICH
SENE SEC. 9, T. 139 N., R. 99 W.
STARK COUNTY

46



← 13.6 MILES →

NDGS NO. 8342
SUPRON ENERGY CORP.
NO. 1 LAWRENCE
NWNW SEC. 36, T. 140 N., R. 95 W.
STARK COUNTY

47



← 41.6 MILES →

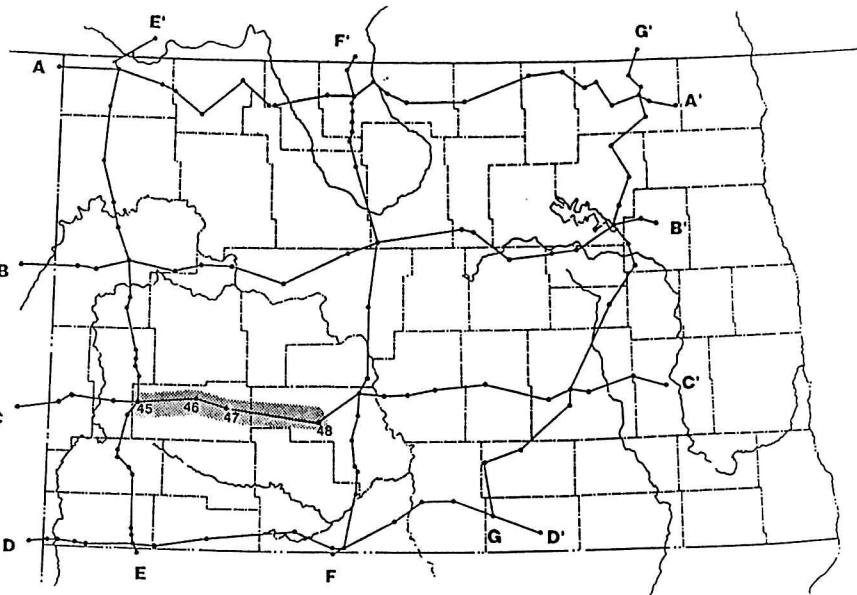
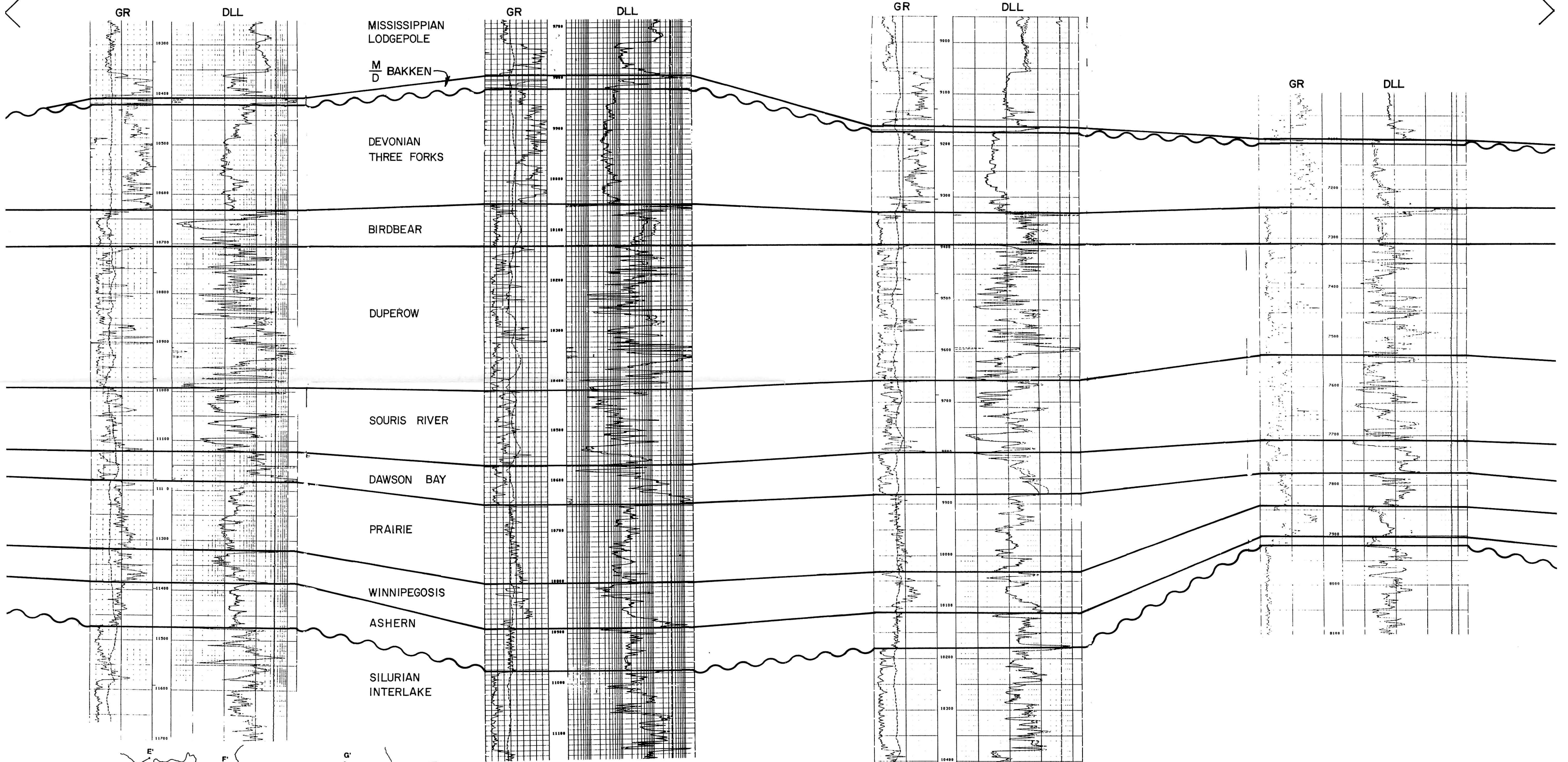
NDGS NO. 9257
GULF OIL CORP.
NO. 1-19-4B HAMANN
NESW SEC. 19, T. 139 N., R. 92 W.
STARK COUNTY

48



← 22.2 MILES →

NDGS NO. 7691
AMOCO PRODUCTION CO.
NO. 1 OLIN
SENE SEC. 19, T. 138 N., R. 85 W.
MORTON COUNTY



LEGEND

CONTACT DESIGNATIONS	LOG TYPE	WELL SYMBOLS
S M O D UNIFORMITY	GR - GAMMA RAY	⊗ - PLUGGED AND ABANDONED WELL
— INFERRED INTERWELL CONTACT	SP - SPONTANEOUS POTENTIAL	● - PRODUCING OIL WELL
— UNIFORMITY	DLL - DUAL LATEROLOG	◆ - ABANDONED OIL WELL
— FACIES CHANGES	IL - INDUCTION LOG	★ - SALTWATER DISPOSAL WELL
Ju - JURASSIC UNDIFFERENTIATED	ES - ELECTRICAL SURVEY	✱ - INJECTION WELL
Mp - MISSISSIPPIAN LODGEPOLE FORMATION	BHC - BOREHOLE COMPENSATED SONIC	
M - MISSISSIPPIAN	CN-FDC - COMPENSATED NEUTRON LOG - FORMATION DENSITY LOG	
D - DEVONIAN	DIL - DUAL INDUCTION LOG	
S - SILURIAN	LL - LATEROLOG	
O - ORDOVICIAN		

49



11.2 MILES

50



9.8 MILES

51



12.1 MILES

52



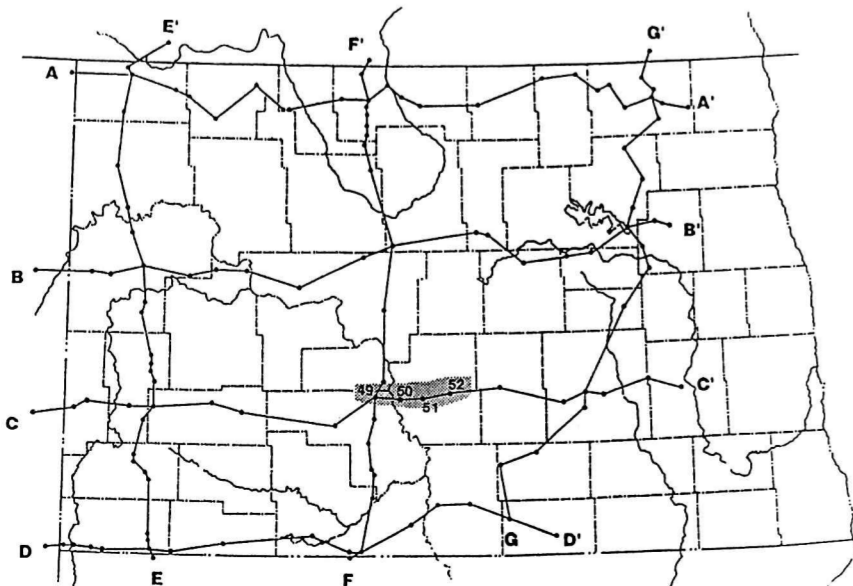
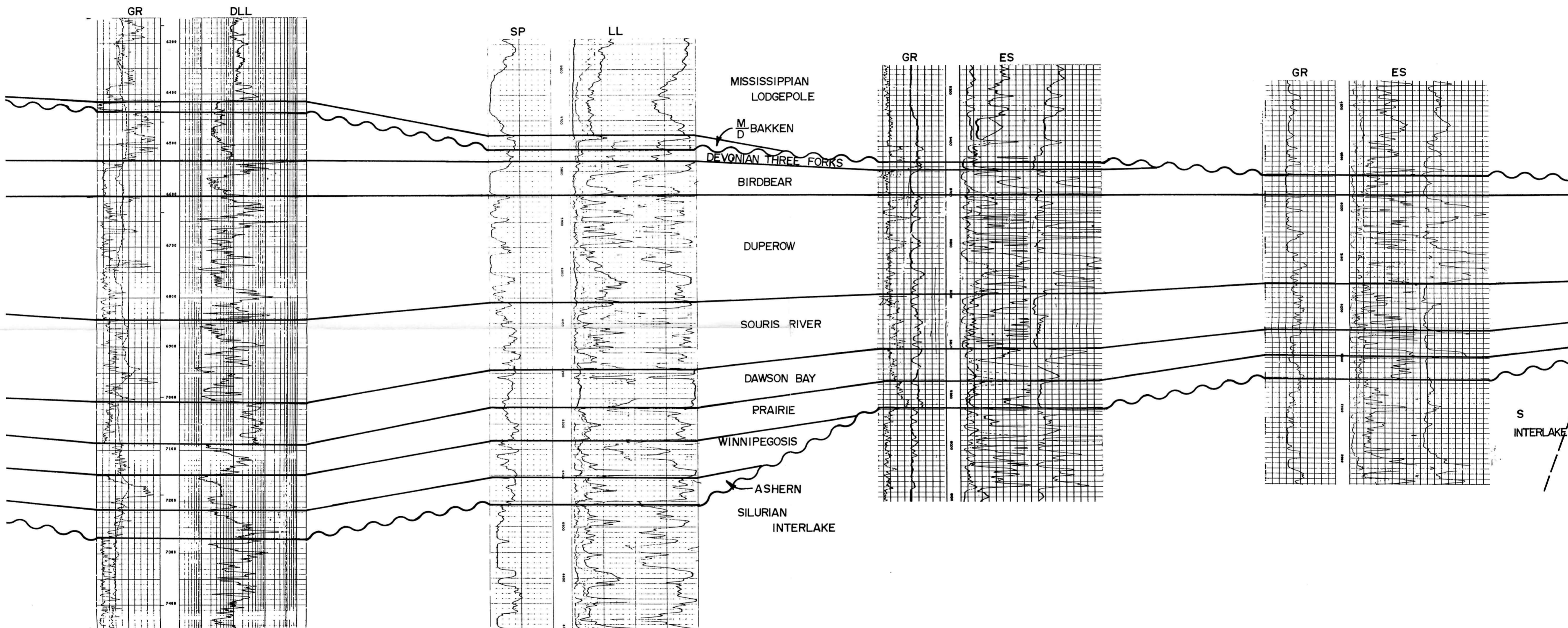
23.0 MILES

NDGS NO. 8553
SHELL OIL CO.
NO. 22-27 VOGEL
SESW SEC. 17, T. 140 N., R. 82 W.
MORTON COUNTY

NDGS NO. 4685
E.C. JOHNSON INC.
NO. 1 L. EDWARDS
SWSW SEC. 19, T. 140 N., R. 80 W.
BURLEIGH COUNTY

NDGS NO. 772
CAROLINE HUNT TRUST ESTATE
NO. 1 PAUL RYBERG
NWNW SEC. 23, T. 140 N., R. 79 W.
BURLEIGH COUNTY

NDGS NO. 1409
LEACH OIL & CALVERT
NO. 1 PATTERSON LAND CO.
NWSE SEC. 11, T. 140 N., R. 77 W.
BURLEIGH COUNTY



LEGEND	
CONTACT DESIGNATIONS	LOG TYPE
— SYSTEM BOUNDARY	GR — GAMMA RAY
— INFERRED INTERWELL CONTACT	SP — SPONTANEOUS POTENTIAL
— UNCONFORMITY	DLL — DUAL LATEROLOG
— FACIES CHANGES	IL — INDUCTION LOG
JU — JURASSIC UNDIFFERENTIATED	ES — ELECTRICAL SURVEY
M ₀ — MISSISSIPPIAN LODGEPOLE FORMATION	BHC — BOREHOLE COMPENSATED SONIC
M — MISSISSIPPIAN	CN-FDC — COMPENSATED NEUTRON LOG — FORMATION DENSITY LOG
D — DEVONIAN	DIL — DUAL INDUCTION LOG
S — SILURIAN	LL — LATEROLOG
O — ORDOVICIAN	
	WELL SYMBOLS
	◊ — PLUGGED AND ABANDONED WELL
	● — PRODUCING OIL WELL
	◆ — ABANDONED OIL WELL
	⊙ — SALT WATER DISPOSAL WELL
	⊛ — INJECTION WELL

53



← 28.1 MILES →

54



← 11.0 MILES →

55



← 9.3 MILES →

56



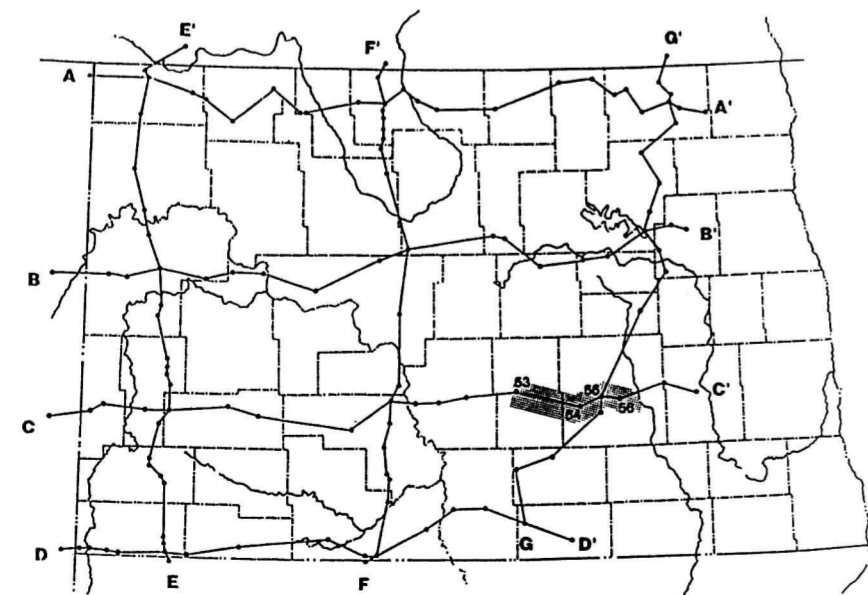
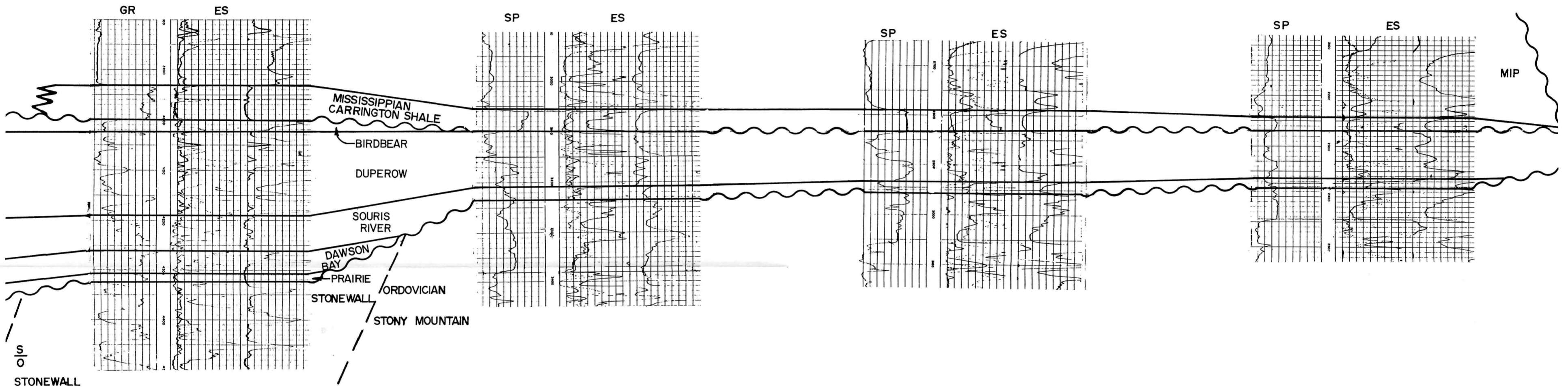
← 21.1 MILES →

NDGS NO. 24
MAGNOLIA PETROLEUM
DAKOTA "A" STRAT TEST
SENE SEC. 36, T.141 N., R.73 W.
KIDDER COUNTY

NDGS NO. 644
GORDON B. BUTTERFIELD
NO.1 RUDOLPH TRAUTMAN
SESE SEC. 5, T.139 N., R.68 W.
STUTSMAN COUNTY

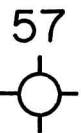
NDGS NO. 671
CALVERT EXPLORATION CO.
NO.1 GEORGE GANSER
NWSW SEC.12, T.140 N., R.67 W.
STUTSMAN COUNTY

NDGS NO. 370
HERMAN HANSON OIL SYNDICATE
REG OGILVIE
NWNW SEC. 21, T.140 N., R.65 W.
STUTSMAN COUNTY



LEGEND

CONTACT DESIGNATIONS	LOG TYPE	WELL SYMBOLS
<ul style="list-style-type: none"> — SYSTEM BOUNDARY — INFERRED INTERWELL CONTACT — UNCONFORMITY — FACIES CHANGES J₁ — JURASSIC UNDIFFERENTIATED M_{1p} — MISSISSIPPIAN LODGEPOLE FORMATION M — MISSISSIPPIAN D — DEVONIAN S — SILURIAN O — ORDOVICIAN 	<ul style="list-style-type: none"> GR — GAMMA RAY SP — SPONTANEOUS POTENTIAL DLL — DUAL LATEROLOG IL — INDUCTION LOG ES — ELECTRICAL SURVEY BHC — BOREHOLE COMPENSATED SONIC CNL-FDC — COMPENSATED NEUTRON LOG — FORMATION DENSITY LOG DIL — DUAL INDUCTION LOG LL — LATEROLOG 	<ul style="list-style-type: none"> ⊙ — PLUGGED AND ABANDONED WELL ● — PRODUCING OIL WELL ⊕ — ABANDONED OIL WELL ⊖ — SALTWATER DISPOSAL WELL ⊛ — INJECTION WELL

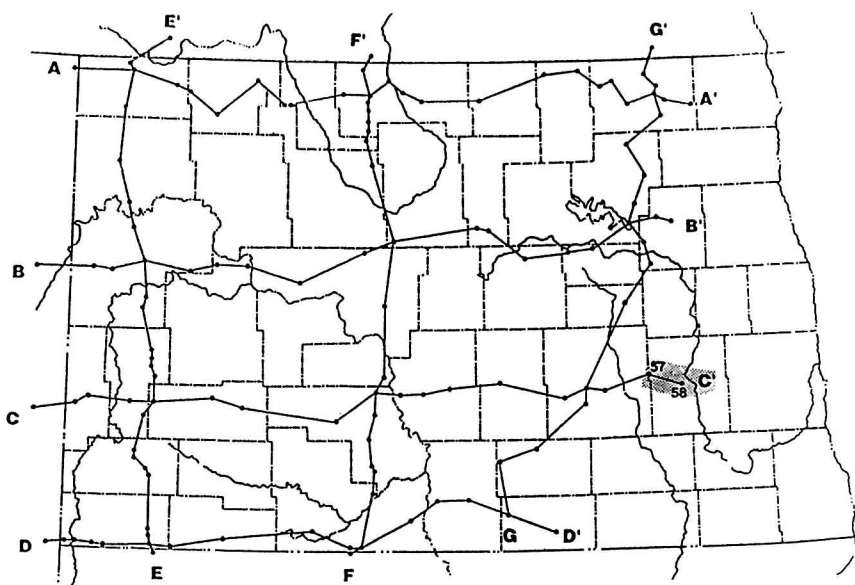
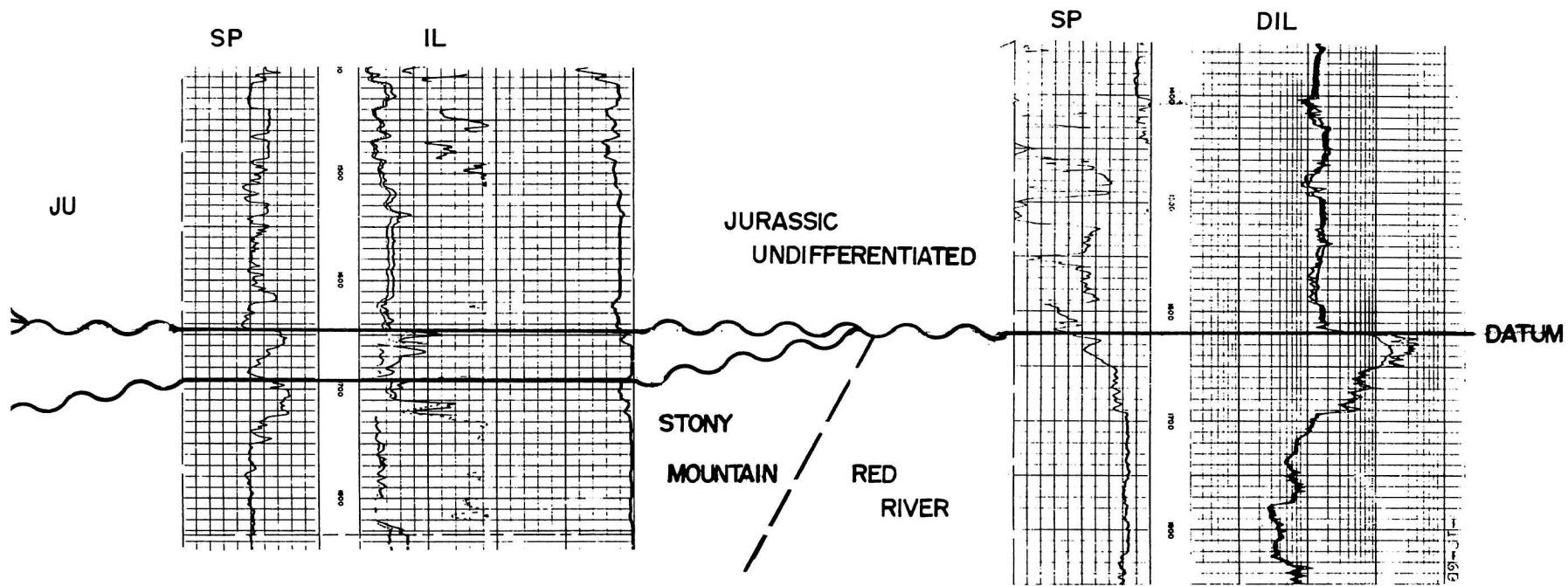


← 15.0 MILES →



NDGS NO. 4678
JACK M. JOHNSTON DRILLING CO.
NO. 1 CLARENCE JOHNSON
NWSE SEC. 30, T. 141 N., R. 61 W.
BARNES COUNTY

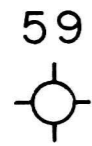
NDGS NO. 4640
J.M. JOHNSTON et al
NO. 1 ALLAN E. VIG
SESW SEC. 9, T. 140 N., R. 59 W.
BARNES COUNTY



LEGEND		
CONTACT DESIGNATIONS	LOG TYPE	WELL SYMBOLS
<ul style="list-style-type: none"> - SYSTEM BOUNDARY - INFERRED INTERWELL CONTACT - UNCONFORMITY - FACES CHANGES Ju - JURASSIC UNDIFFERENTIATED Mlp - MISSISSIPPIAN LODGEPOLE FORMATION M - MISSISSIPPIAN D - DEVONIAN S - SILURIAN O - ORDOVICIAN 	<ul style="list-style-type: none"> GR - GAMMA RAY SP - SPONTANEOUS POTENTIAL DLL - DUAL LATEROLOG IL - INDUCTION LOG ES - ELECTRICAL SURVEY BIC - BOREHOLE COMPENSATED SONIC CNL-FDC - COMPENSATED NEUTRON LOG - FORMATION DENSITY LOG DIL - DUAL INDUCTION LOG LL - LATEROLOG 	<ul style="list-style-type: none"> - PLUGGED AND ABANDONED WELL - PRODUCING OIL WELL - ABANDONED OIL WELL - SALTWATER DISPOSAL WELL - INJECTION WELL

D
WEST

SHEET 1 OF 4



12.9 MILES

60

2.5 MILES

61

7.4 MILES

62

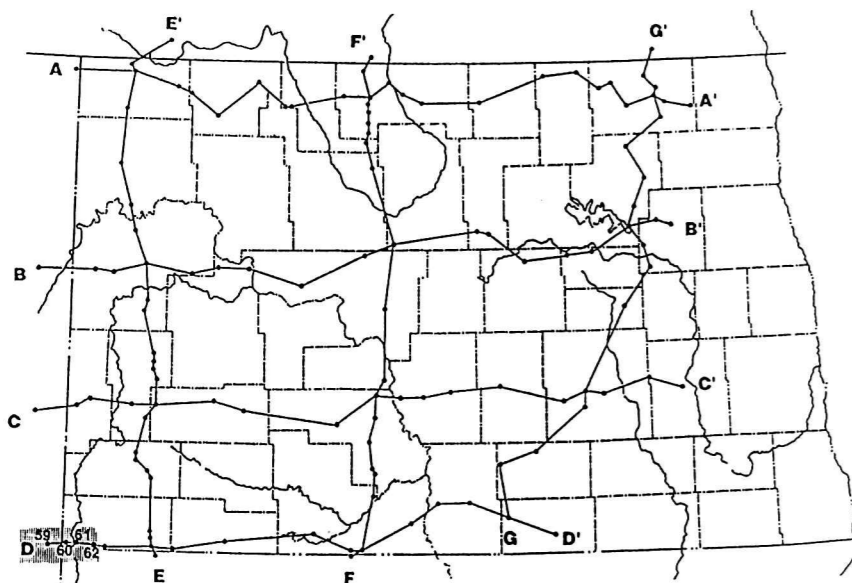
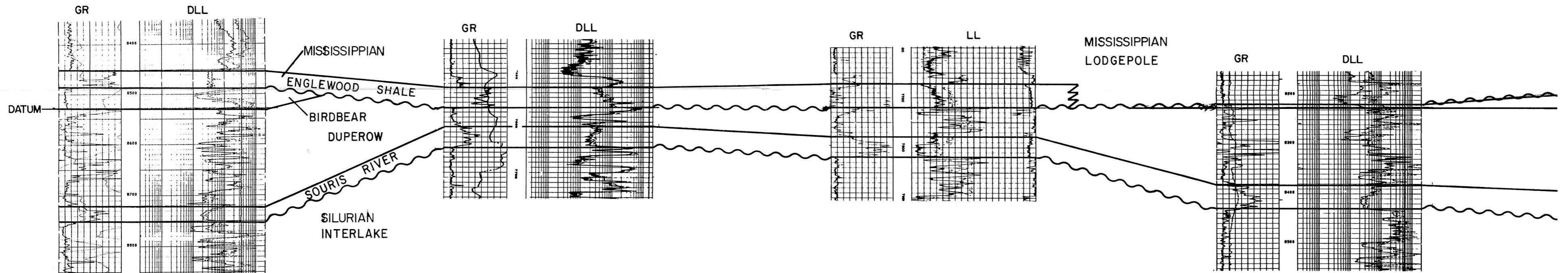
5.3 MILES

NATOMAS NORTH AMERICA INC.
NATOMAS NO. 1-31 HUNTRESS
SE NW SEC. 31, T. 3N, R. 61E
FALLON COUNTY
MONTANA

NDGS NO. 6161
HOUSTON OIL & MINERALS
NO. 11-9 JOHNSON
NWNW SEC. 9, T. 129 N., R. 106 W.
BOWMAN COUNTY

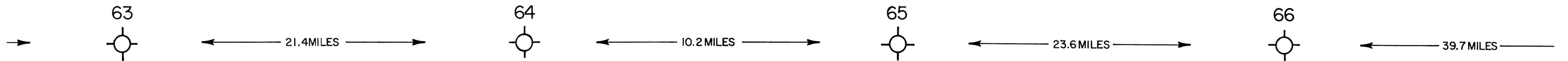
NDGS NO. 3261
CONTINENTAL OIL CO.
NO. 1 FEDERAL
NWNE SEC. 15, T. 129 N., R. 106 W.
BOWMAN COUNTY

NDGS NO. 10228
TOTAL PETROLEUM INC.
NO. 1-24 RALPH
SWNW SEC. 24, T. 129 N., R. 105 W.
BOWMAN COUNTY



LEGEND		
CONTACT DESIGNATIONS	LOG TYPE	WELL SYMBOLS
S M O D — SYSTEM BOUNDARY	GR — GAMMA RAY	○ — PLUGGED AND ABANDONED WELL
— INFERRED INTERWELL CONTACT	SP — SPONTANEOUS POTENTIAL	● — PRODUCING OIL WELL
— UNCONFORMITY	DLL — DUAL LATEROLOG	◆ — ABANDONED OIL WELL
— FACIES CHANGES	IL — INDUCTION LOG	◆ — SALTWATER DISPOSAL WELL
Ju — JURASSIC UNDIFFERENTIATED	ES — ELECTRICAL SURVEY	★ — INJECTION WELL
Mlp — MISSISSIPPIAN LODGEPOLE FORMATION	BHC — BOREHOLE COMPENSATED SONIC	
M — MISSISSIPPIAN	CNL-FDC — COMPENSATED NEUTRON LOG — FORMATION DENSITY LOG	
D — DEVONIAN	DIL — DUAL INDUCTION LOG	
S — SILURIAN	LL — LATEROLOG	
O — ORDOVICIAN		

TIE WELL E-E'

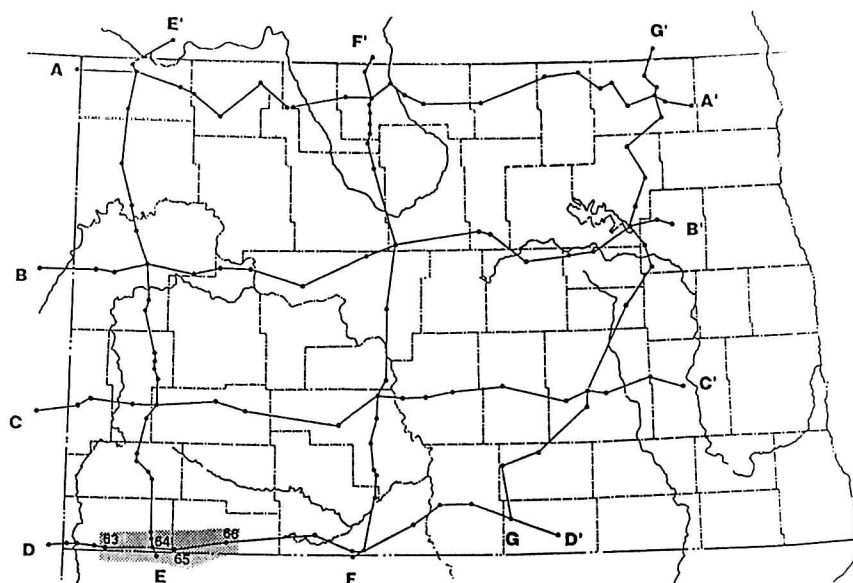
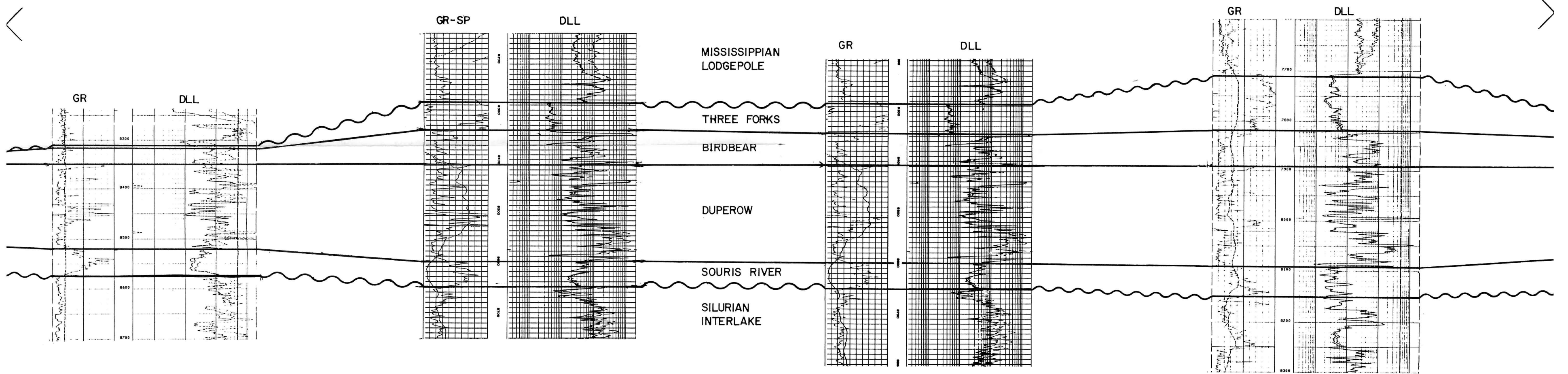


NDGS NO. 9201
LUFF EXPLORATION CO.
NO. G-26 JORGENSEN
SWNE SEC. 26, T.129 N., R.104 W.
BOWMAN COUNTY

NDGS NO. 6370
C.F. BRAUN & CO.
NO.1 PALOZWESKI
SWNE SEC. 21, T.129 N., R.100 W.
BOWMAN COUNTY

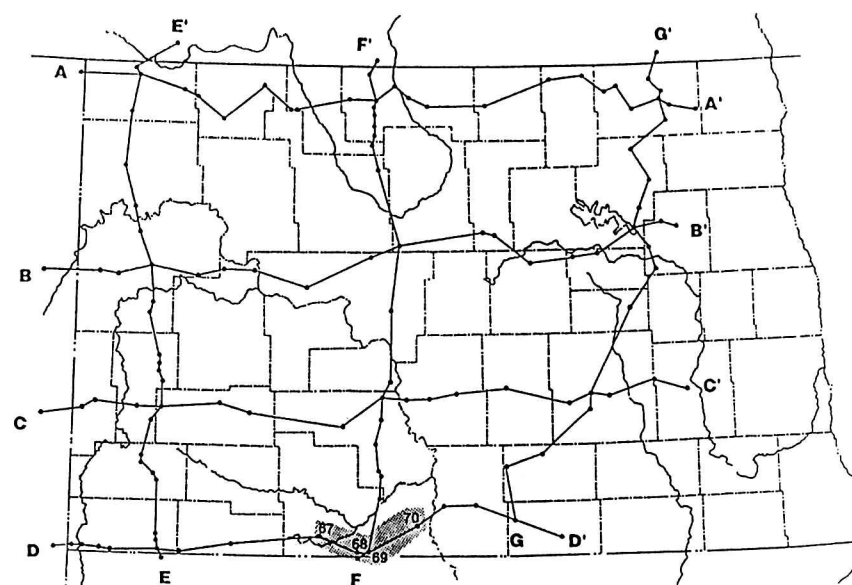
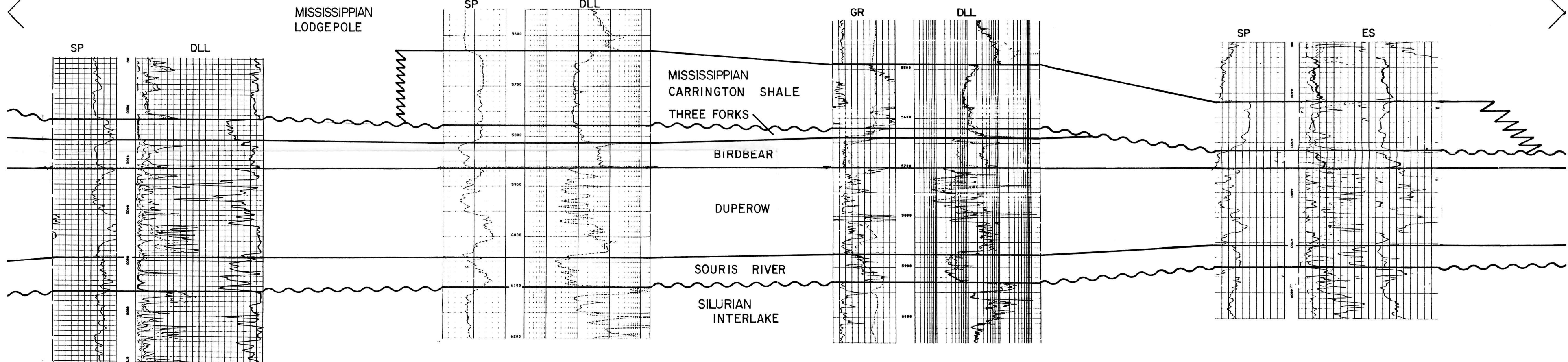
NDGS NO. 6050
AMERADA HESS CORP.
NO.1 HOLMQUIST
SWSW SEC. 30, T.129 N., R.98 W.
ADAMS COUNTY

NDGS NO. 8091
SUPRON ENERGY CORP.
NO.1 MAURICE MILLER
NESW SEC. 7, T.129 N., R.94 W.
ADAMS COUNTY

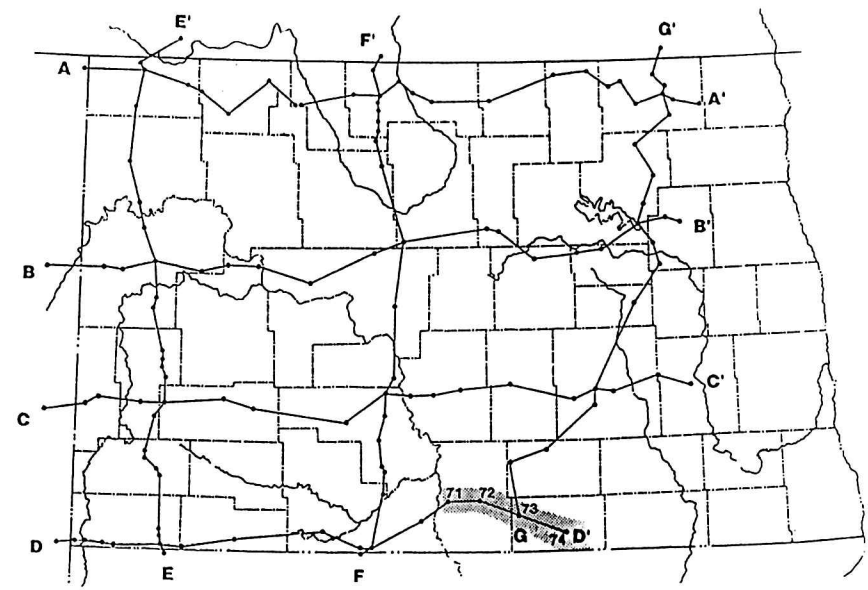
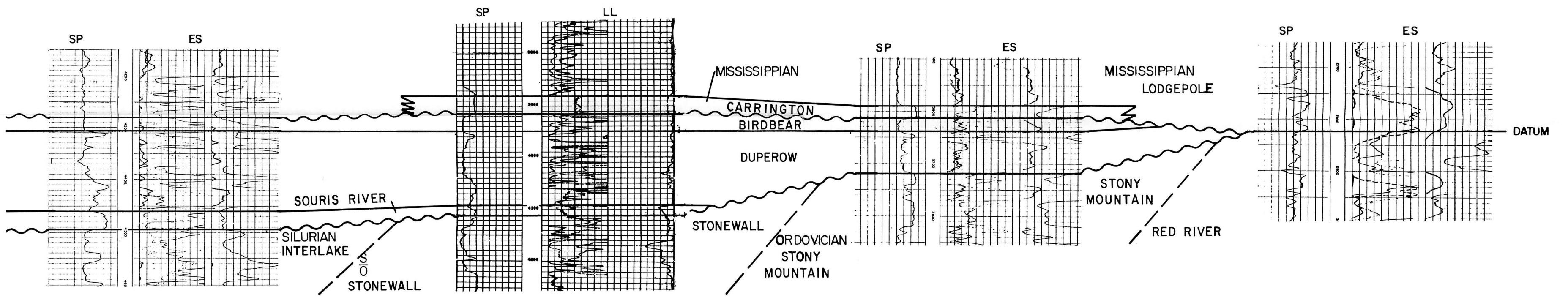
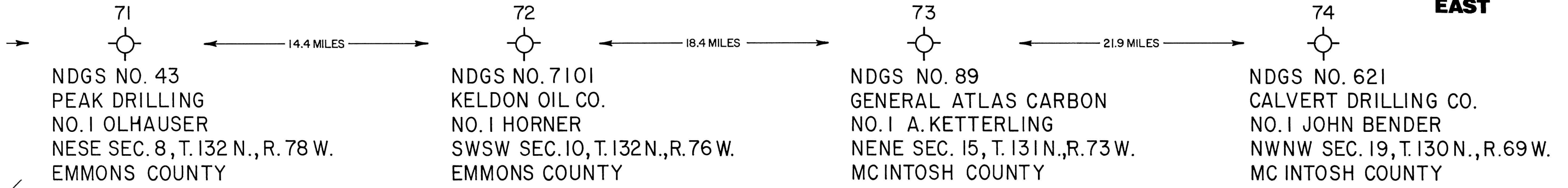


CONTACT DESIGNATIONS		LOG TYPE		WELL SYMBOLS	
	-SYSTEM BOUNDARY	GR	-GAMMA RAY		-PLUGGED AND ABANDONED WELL
	-INFERRED INTERWELL CONTACT	SP	-SPONTANEOUS POTENTIAL		-PRODUCING OIL WELL
	-UNCONFORMITY	DLL	-DUAL LATEROLOG		-ABANDONED OIL WELL
	-FACES CHANGES	IL	-INDUCTION LOG		-SALTWATER DISPOSAL WELL
Ju	-JURASSIC UNDIFFERENTIATED	ES	-ELECTRICAL SURVEY		-INJECTION WELL
Mlp	-MISSISSIPPIAN LODGEPOLE FORMATION	BHC	-BOREHOLE COMPENSATED SONIC		
M	-MISSISSIPPIAN	CNL-FDC	-COMPENSATED NEUTRON LOG-FORMATION DENSITY LOG		
D	-DEVONIAN	DIL	-DUAL INDUCTION LOG		
S	-SILURIAN	LL	-LATEROLOG		
O	-ORDOVICIAN				

<p>67</p> <p>NDGS NO. 5118 HELMERICH & PAYNE INC. NO. 23 - I BURLINGTON NORTHERN NWSW SEC. 23, T. 130 N., R. 88 W. GRANT COUNTY</p>	<p>68</p> <p>NDGS NO. 6654 UNICHEM INTERNATIONAL INC. NO. 1 JACOBS SESE SEC. 27, T. 129 N., R. 85 W. SIOUX COUNTY</p>	<p>69</p> <p>NDGS NO. 7930 CHEVRON USA INC. NO. 1 MORTENSON SWSW SEC. 28, T. 129 N., R. 84 W. SIOUX COUNTY</p>	<p>70</p> <p>NDGS NO. 631 OHIO OIL CO. NO. 1 STANDING ROCK SIOUX TRIBE NESW SEC. 29, T. 131 N., R. 80 W. SIOUX COUNTY</p>
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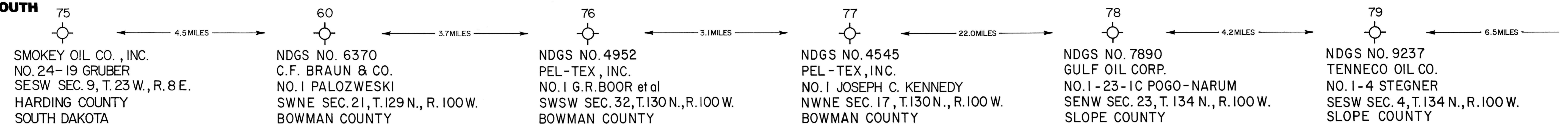
LEGEND		
<p>CONTACT DESIGNATIONS</p> <p>S M D — SYSTEM BOUNDARY</p> <p>— INFERRED INTERWELL CONTACT</p> <p>UNCONFORMITY</p> <p>— FACIES CHANGES</p> <p>Ju — JURASSIC UNDIFFERENTIATED</p> <p>Mlp — MISSISSIPPIAN LODGEPOLE FORMATION</p> <p>M — MISSISSIPPIAN</p> <p>D — DEVONIAN</p> <p>S — SILURIAN</p> <p>O — ORDOVICIAN</p>	<p>LOG TYPE</p> <p>GR — GAMMA RAY</p> <p>SP — SPONTANEOUS POTENTIAL</p> <p>DLL — DUAL LATEROLOG</p> <p>IL — INDUCTION LOG</p> <p>ES — ELECTRICAL SURVEY</p> <p>BHC — BOREHOLE COMPENSATED SONIC</p> <p>CNL-FDC — COMPENSATED NEUTRON LOG — FORMATION DENSITY LOG</p> <p>DIL — DUAL INDUCTION LOG</p> <p>LL — LATEROLOG</p>	<p>WELL SYMBOLS</p> <p>◊ — PLUGGED AND ABANDONED WELL</p> <p>● — PRODUCING OIL WELL</p> <p>◆ — ABANDONED OIL WELL</p> <p>⊕ — SALTWATER DISPOSAL WELL</p> <p>⊗ — INJECTION WELL</p>



LEGEND

CONTACT DESIGNATIONS	LOG TYPE	WELL SYMBOLS
S O D	GR — GAMMA RAY	○ — PLUGGED AND ABANDONED WELL
— SYSTEM BOUNDARY	SP — SPONTANEOUS POTENTIAL	● — PRODUCING OIL WELL
- - - INFERRED INTERWELL CONTACT	DL — DUAL LATEROLOG	◆ — ABANDONED OIL WELL
~ UNCONFORMITY	IL — INDUCTION LOG	★ — SALT WATER DISPOSAL WELL
Ju — JURASSIC UNDIFFERENTIATED	ES — ELECTRICAL SURVEY	✱ — INJECTION WELL
Mip — MISSISSIPPIAN LODGEPOLE FORMATION	BKC — BOREHOLE COMPENSATED SONIC	
M — MISSISSIPPIAN	CNL-FDC — COMPENSATED NEUTRON LOG — FORMATION DENSITY LOG	
D — DEVONIAN	DIL — DUAL INDUCTION LOG	
S — SILURIAN	LL — LATEROLOG	
O — ORDOVICIAN		

TIE WELL D-D'



SMOKEY OIL CO., INC.
NO. 24-19 GRUBER
SESW SEC. 9, T. 23 W., R. 8 E.
HARDING COUNTY
SOUTH DAKOTA

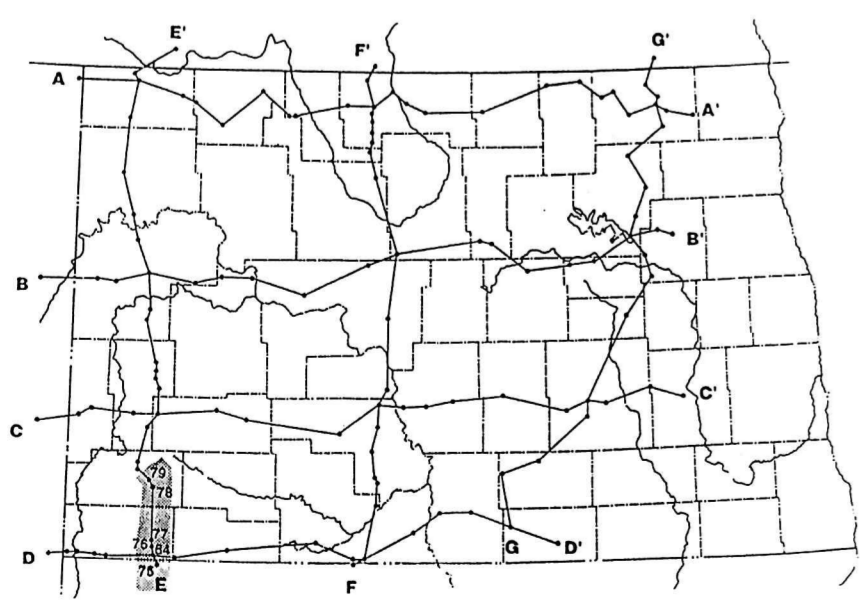
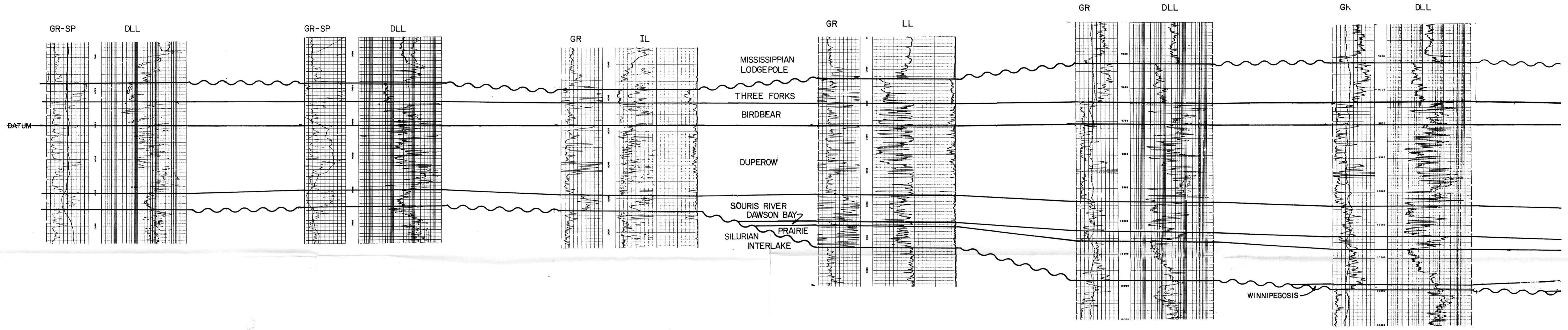
NDGS NO. 6370
C.F. BRAUN & CO.
NO. 1 PALOZWESKI
SWNE SEC. 21, T. 129 N., R. 100 W.
BOWMAN COUNTY

NDGS NO. 4952
PEL-TEX, INC.
NO. 1 G.R. BOOR et al
SWSW SEC. 32, T. 130 N., R. 100 W.
BOWMAN COUNTY

NDGS NO. 4545
PEL-TEX, INC.
NO. 1 JOSEPH C. KENNEDY
NWNW SEC. 17, T. 130 N., R. 100 W.
BOWMAN COUNTY

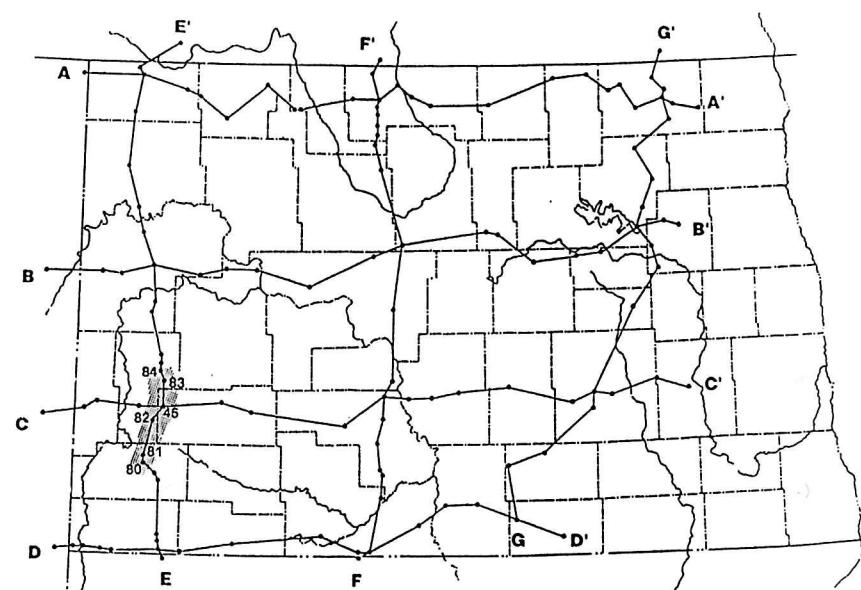
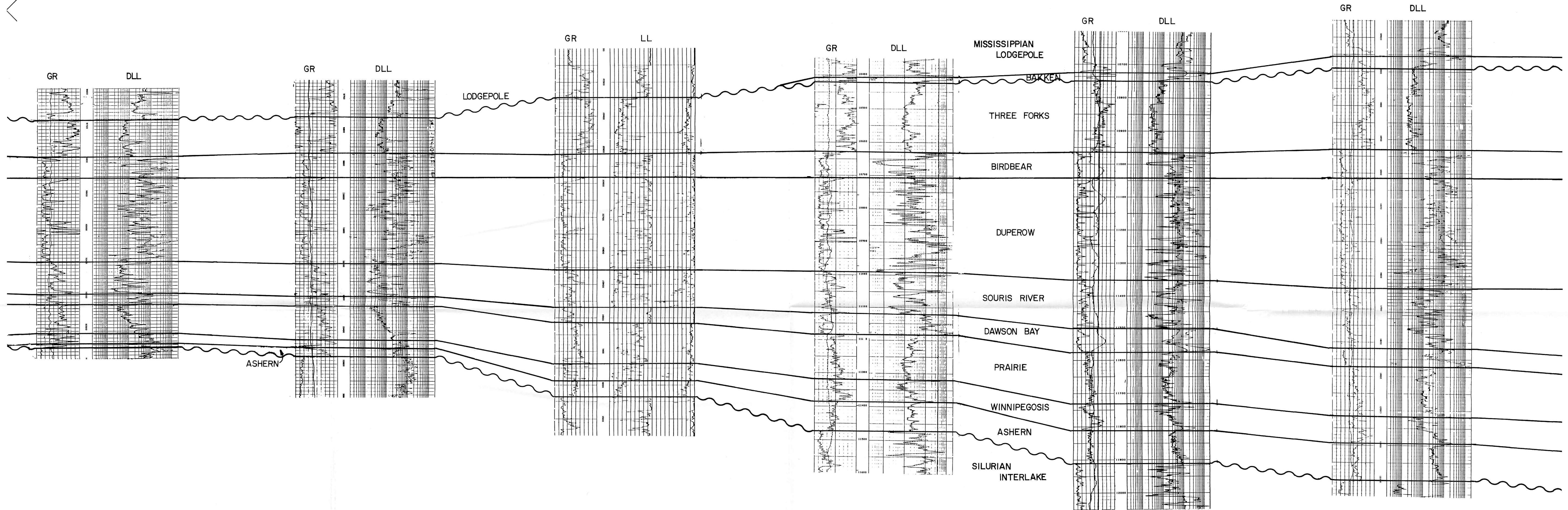
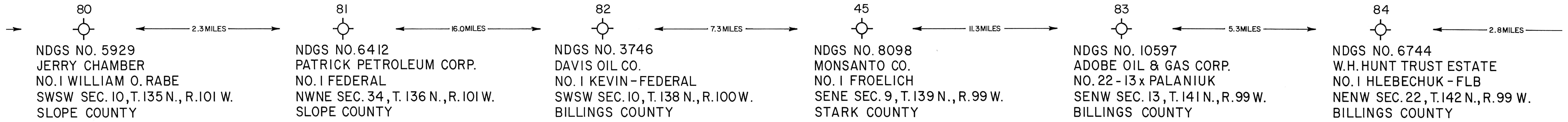
NDGS NO. 7890
GULF OIL CORP.
NO. 1-23-1C POGO-NARUM
SESW SEC. 23, T. 134 N., R. 100 W.
SLOPE COUNTY

NDGS NO. 9237
TENNECO OIL CO.
NO. 1-4 STEGNER
SESW SEC. 4, T. 134 N., R. 100 W.
SLOPE COUNTY



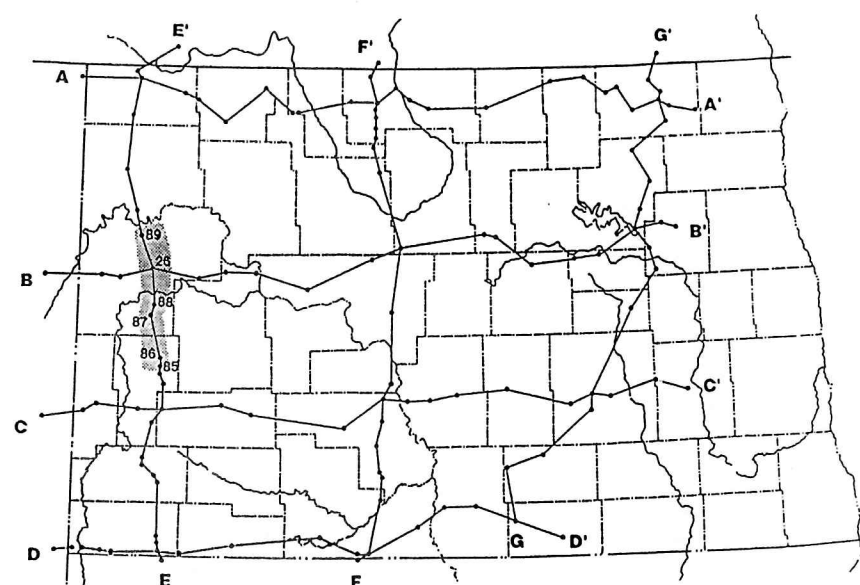
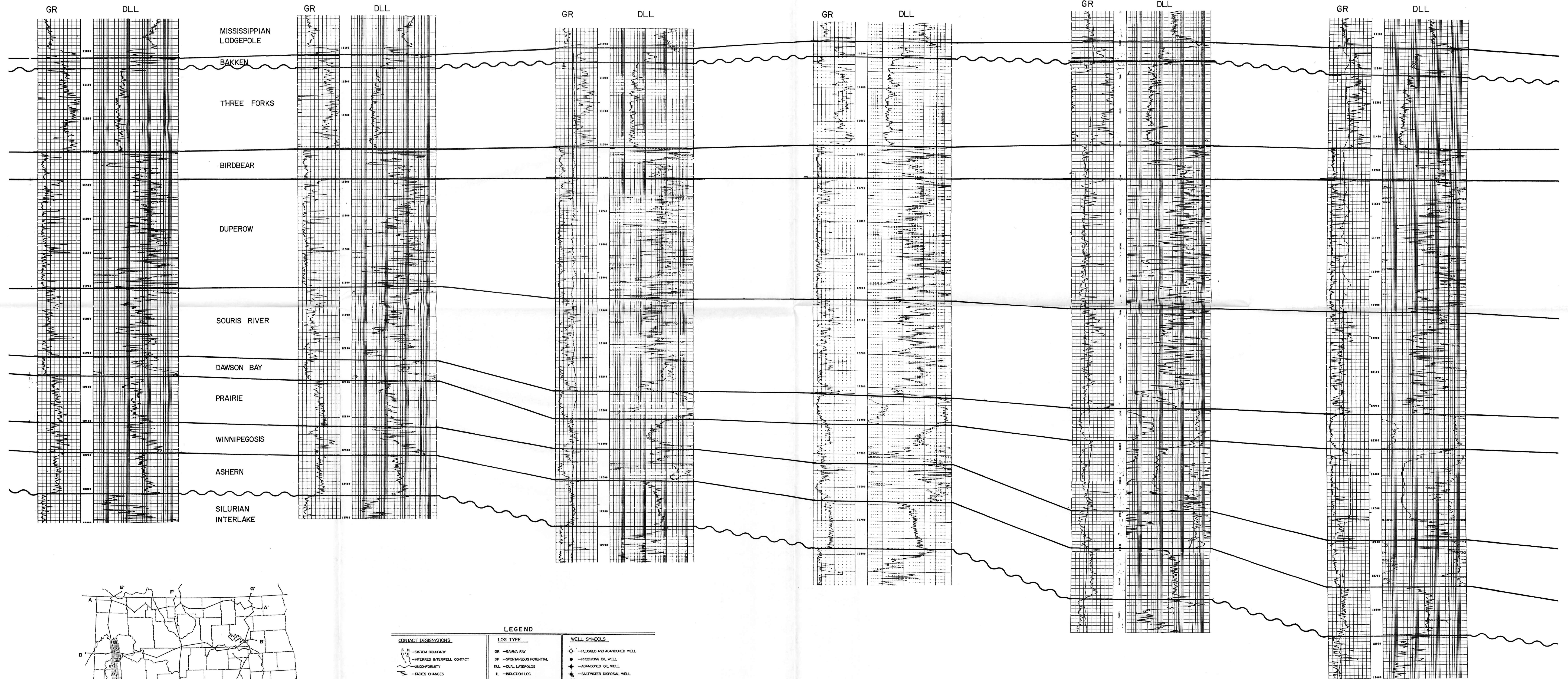
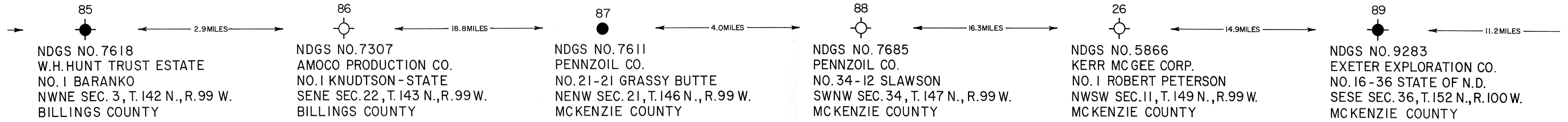
LEGEND

CONTACT DESIGNATIONS	LOG TYPE	WELL SYMBOLS
SM - SYSTEM BOUNDARY	GR - GAMMA RAY	⊕ - PLUGGED AND ABANDONED WELL
SP - SPHERICAL INTERWELL CONTACT	SP - SPONTANEOUS POTENTIAL	⊙ - PRODUCING OIL WELL
UNCONFIRMED CONTACT	DLL - DUAL LATERLOGS	⊙ - ABANDONED OIL WELL
— FACES CHANGES	IL - INDUCTION LOG	⊙ - SALT WATER DISPOSAL WELL
JU - JURASSIC UNDIFFERENTIATED	ES - ELECTRICAL SURVEY	⊙ - INJECTION WELL
Mp - MISSISSIPPIAN LODGEPOLE FORMATION	BKC - BOREHOLE COMPENSATED SONIC	
M - MISSISSIPPIAN	CN-FDC - COMPENSATED NEUTRON LOG - FORMATION RESISTIVITY LOG	
D - DEVONIAN	DIL - DUAL INDUCTION LOG	
S - SILURIAN	LL - LATERLOGS	
O - ORDOVICIAN		

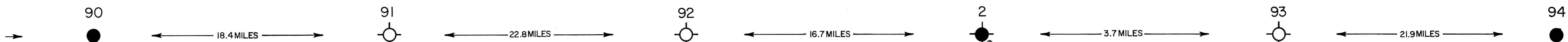


LEGEND

CONTACT DESIGNATIONS	LOG TYPE	WELL SYMBOLS
— SYSTEM BOUNDARY	GR — GAMMA RAY	◇ — PLUGGED AND ABANDONED WELL
— IMPERFECT INTERWELL CONTACT	SP — SPONTANEOUS POTENTIAL	● — PRODUCING OIL WELL
— UNCONFORMITY	DLL — DUAL LATEROLOG	○ — ABANDONED OIL WELL
— FACIES CHANGE	IL — INDUCTION LOG	★ — SALT WATER DISPOSAL WELL
M — MASSACHUSETTS UNDIFFERENTIATED	ES — ELECTRICAL SURVEY	✱ — INJECTION WELL
M ₁₀ — MISSISSIPPIAN LODGEPOLE FORMATION	B/C — BOREHOLE COMPENSATED SONIC	
M — MISSISSIPPIAN	DN-FDC — COMPENSATED NEUTRON LOG - FORMATION DENSITY LOG	
D — DEVONIAN	DIL — DUAL INDUCTION LOG	
S — SILURIAN	LL — LATEROLOG	
O — ORDOVICIAN		



LEGEND	
CONTACT DESIGNATIONS	LOG TYPE
— SYSTEM BOUNDARY	GR — GAMMA RAY
— INFERRED INTERWELL CONTACT	SP — SPONTANEOUS POTENTIAL
— UNIFORMITY	DLL — DUAL LATEROLOG
— FACIES CHANGES	IL — INDUCTION LOG
Ju — JURASSIC UNDIFFERENTIATED	ES — ELECTRICAL SURVEY
Mu — MISSISSIPPIAN LODGEPOLE FORMATION	B/C — BOREHOLE COMPENSATED SONIC
M — MISSISSIPPIAN	DNFDC — COMPENSATED NEUTRON LOG — FORMATION RESISTIVITY LOG
D — DEVONIAN	DIL — DUAL INDUCTION LOG
S — SILURIAN	LL — LATEROLOG
O — ORDOVICIAN	
	WELL SYMBOLS
	○ — PLUGGED AND ABANDONED WELL
	● — PRODUCING OIL WELL
	⊙ — ABANDONED OIL WELL
	⊛ — SALTWATER DISPOSAL WELL
	⊜ — INJECTION WELL



NDGS NO. 8441
MAPCO PRODUCTION CO.
NO. 1-1 TOFTE
NENE SEC. 1, T. 153 N., R. 100 W.
WILLIAMS COUNTY

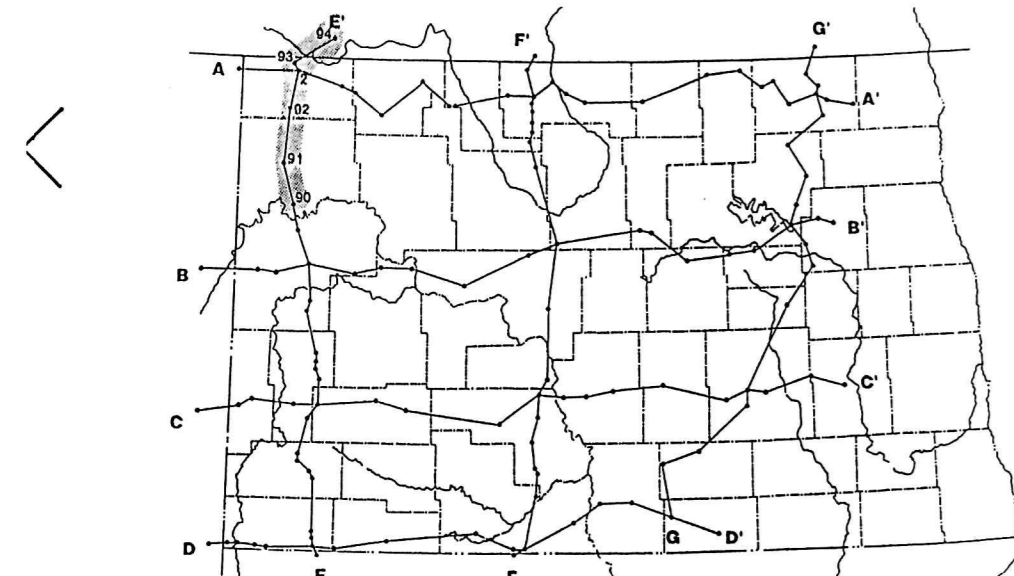
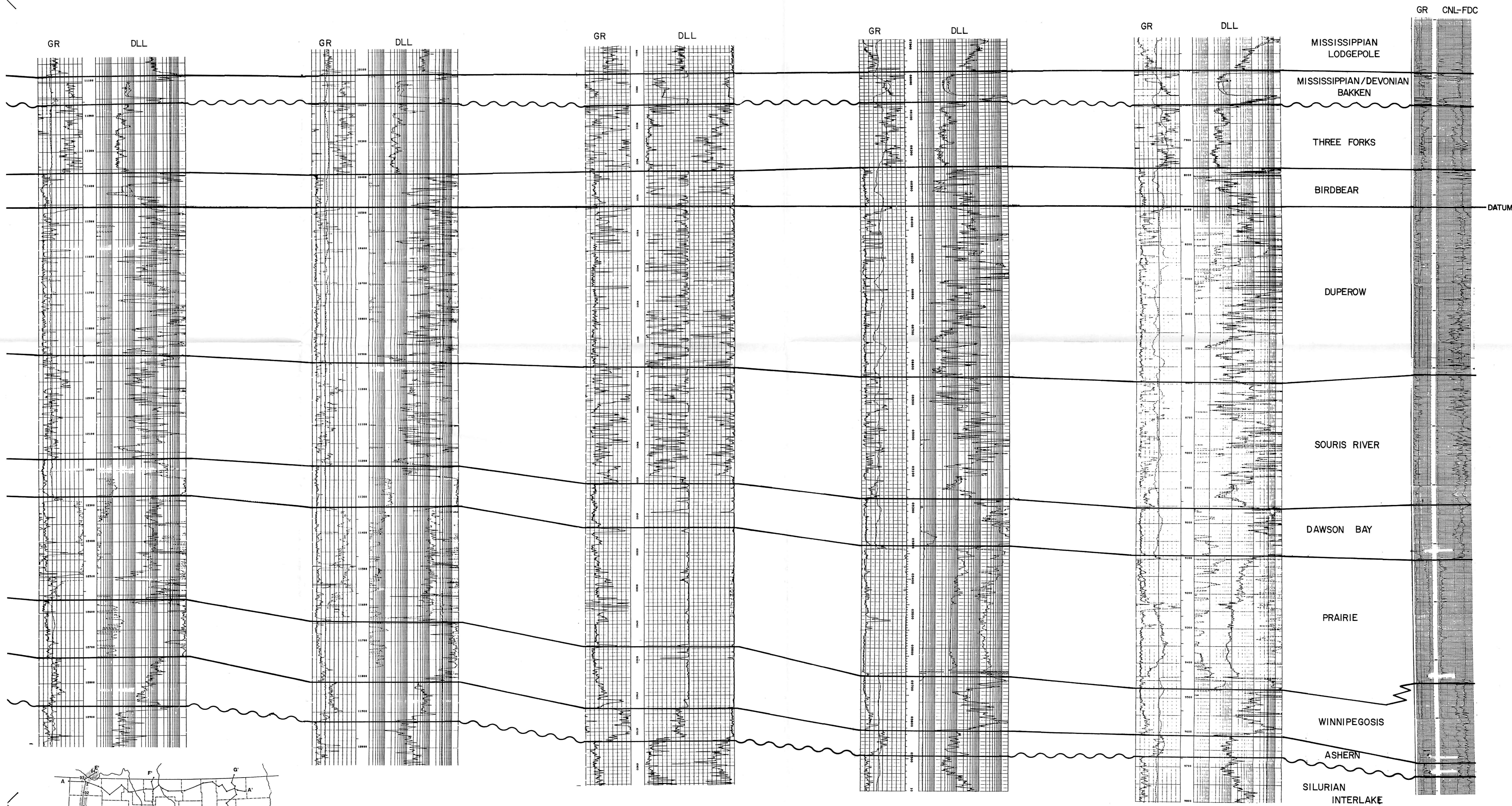
NDGS NO. 9264
NUCORP ENERGY, INC.
NO. 1 DANIEL
SWNW SEC. 6, T. 156 N., R. 100 W.
WILLIAMS COUNTY

NDGS NO. 4837
MIAMI OIL PRODUCTION, INC.
NO. 1 ROY HAGEN
SWNE SEC. 12, T. 160 N., R. 100 W.
DIVIDE COUNTY

NDGS NO. 10230
LOUISIANA LAND & EXPLORATION CO.
NO. 11-24 BORGEN
NWNW SEC. 24, T. 163 N., R. 99 W.
DIVIDE COUNTY

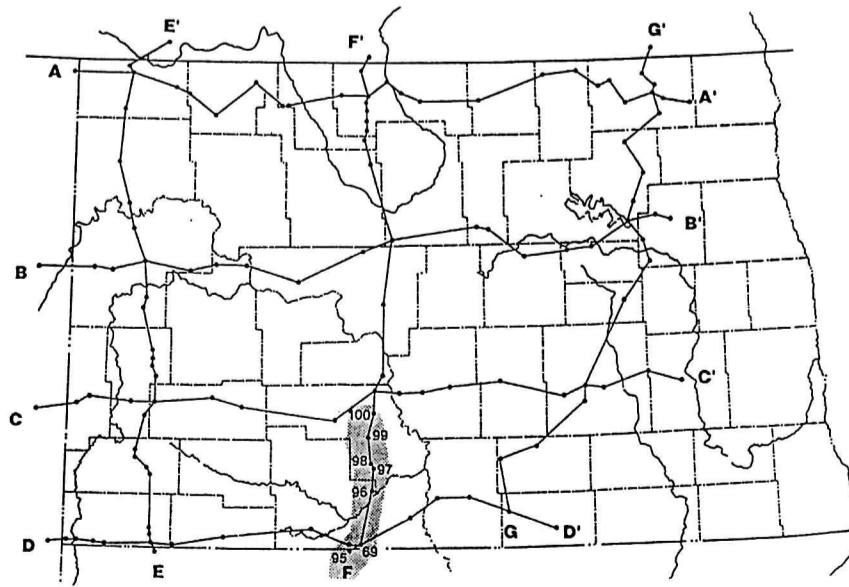
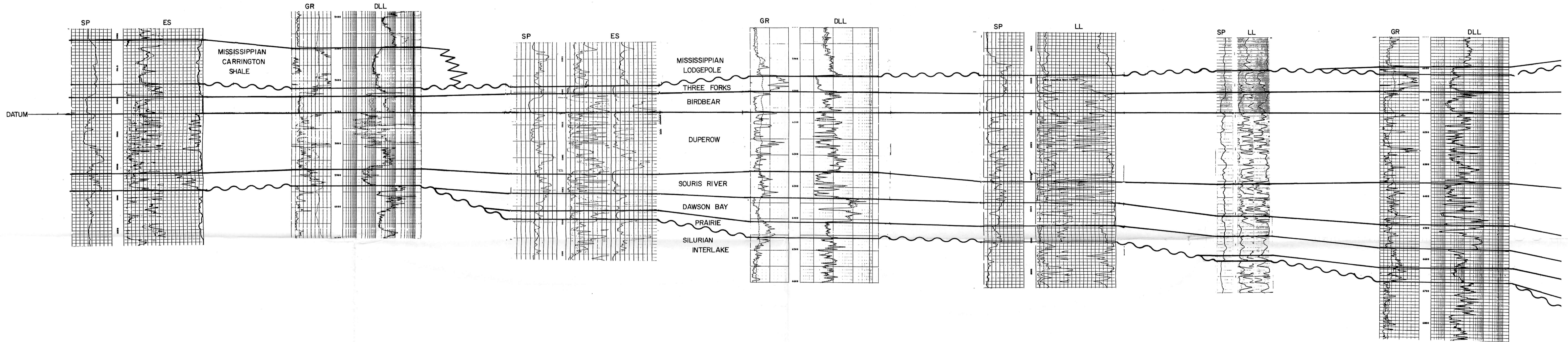
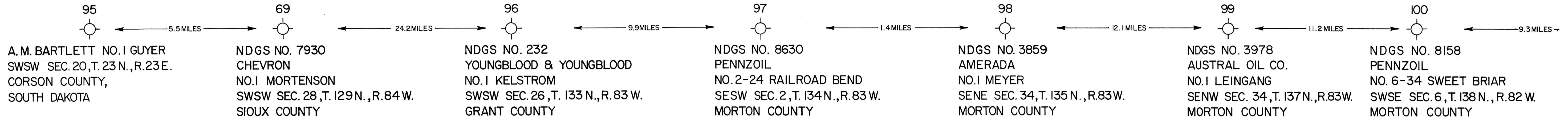
NDGS NO. 10311
TEXACO INC.
NO. 1 F.R. GREGORY
NWSE SEC. 3, T. 163 N., R. 99 W.
DIVIDE COUNTY

HOME OIL CO. LTD.
HOME SRO TABLELAND S.
9-22-2-9
SASKATCHEWAN,
CANADA

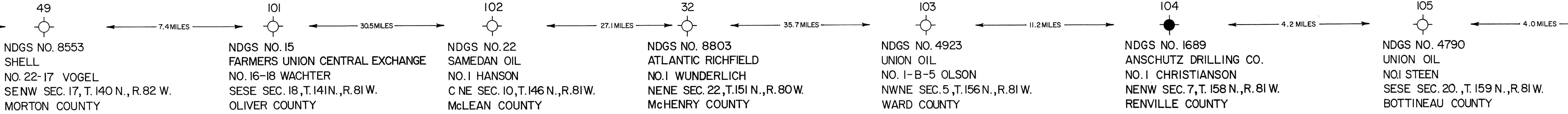


CONTACT DESIGNATIONS		LOG TYPE		WELL SYMBOLS	
—	SYSTEM BOUNDARY	GR	GAMMA RAY	⊗	PLUGGED AND ABANDONED WELL
- - -	INFERRED INTERWELL CONTACT	SP	SPONTANEOUS POTENTIAL	●	PRODUCING OIL WELL
~	UNCONFORMITY	DLL	DUAL LATEROLOG	⊕	ABANDONED OIL WELL
—	FACE CHANGES	I	INDUCTION LOG	⊖	SALTWATER DISPOSAL WELL
J	JURASSIC UNDIFFERENTIATED	ES	ELECTRICAL SURVEY	*	INJECTION WELL
M	MISSISSIPPIAN LODGEPOLE FORMATION	BIC	BIRDBEAR COMPENSATED SONIC		
D	DEVONIAN	CHLFC	COMPENSATED MUDLOG-FORMATION DENSITY LOG		
S	SILURIAN	DIL	DUAL INDUCTION LOG		
O	ORDOVICIAN	LL	LATEROLOG		

TIE WELL D-D'



CONTACT DESIGNATIONS		LOG TYPE		WELL SYMBOLS	
	— SYSTEM BOUNDARY	GR	— GAMMA RAY		— PLUGGED AND ABANDONED WELL
	— INFERRED INTERWELL CONTACT	SP	— SPONTANEOUS POTENTIAL		— PRODUCING OIL WELL
	— UNCONFORMITY	DLL	— DUAL LATERALS		— ABANDONED OIL WELL
	— FACE CHANGES	IL	— INDUCTION LOG		— SALTWATER DISPOSAL WELL
	JU — JURASSIC UNDIFFERENTIATED	ES	— ELECTRICAL SURVEY		— INJECTION WELL
	MLP — MISSISSIPPIAN LODGEPOLE FORMATION	ESC	— SONOBUOLE COMPENSATED SONIC		
	D — DEVONIAN	DMFC	— COMPENSATED NEUTRON LOG—FORMATION DENSITY LOG		
	S — SILURIAN	DIL	— DUAL INDUCTION LOG		
	O — ORDOVICIAN	LL	— LATERALS		



NDGS NO. 8553
SHELL
NO. 22-17 VOGEL
SE NW SEC. 17, T. 140 N., R. 82 W.
MORTON COUNTY

NDGS NO. 15
FARMERS UNION CENTRAL EXCHANGE
NO. 16-18 WACHTER
SE SE SEC. 18, T. 141 N., R. 81 W.
OLIVER COUNTY

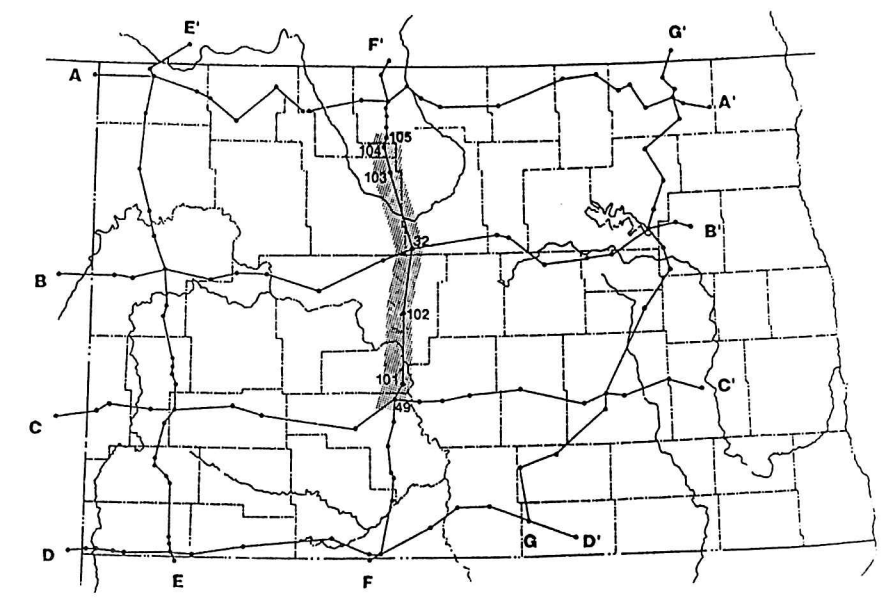
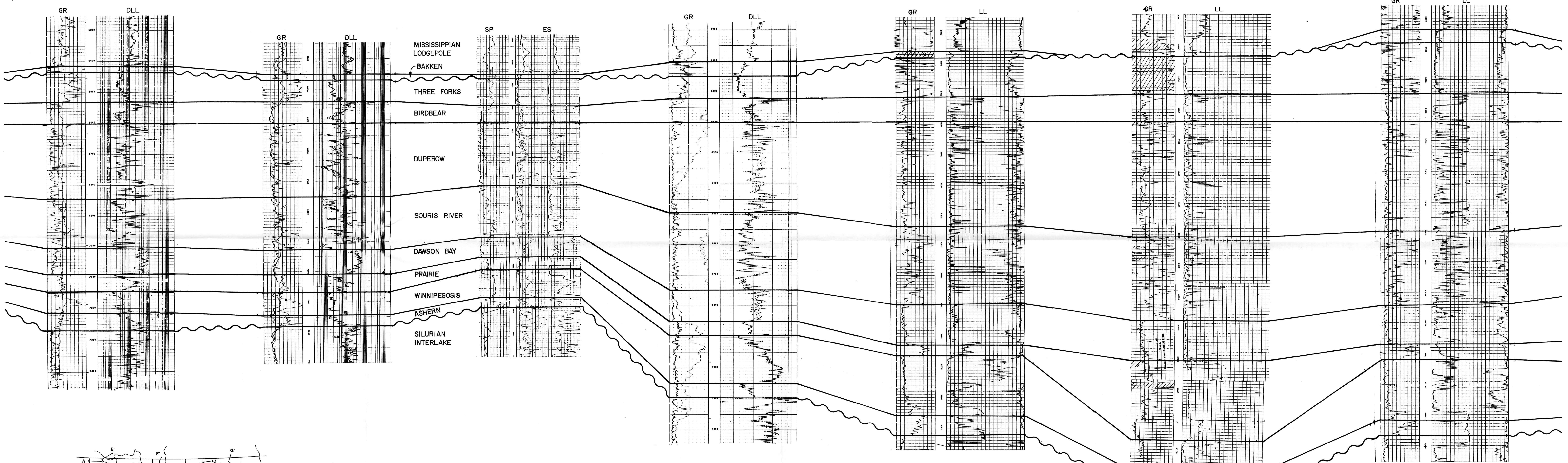
NDGS NO. 22
SAMEDAN OIL
NO. 1 HANSON
C NE SEC. 10, T. 146 N., R. 81 W.
MCLEAN COUNTY

NDGS NO. 8803
ATLANTIC RICHFIELD
NO. 1 WUNDERLICH
NENE SEC. 22, T. 151 N., R. 80 W.
McHENRY COUNTY

NDGS NO. 4923
UNION OIL
NO. 1-B-5 OLSON
NW NE SEC. 5, T. 156 N., R. 81 W.
WARD COUNTY

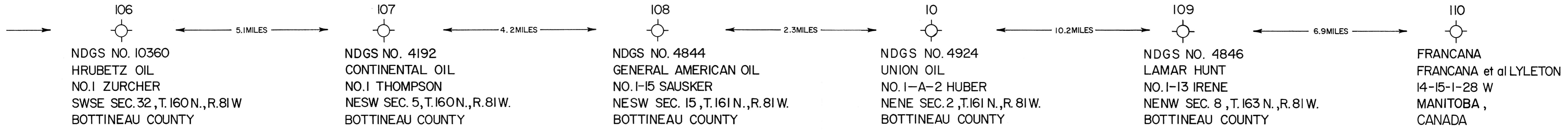
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ANSCHUTZ DRILLING CO.
NO. 1 CHRISTIANSON
NENW SEC. 7, T. 158 N., R. 81 W.
RENNVILLE COUNTY

NDGS NO. 4790
UNION OIL
NO. 1 STEEN
SE SE SEC. 20, T. 159 N., R. 81 W.
BOTTINEAU COUNTY



CONTACT DESIGNATIONS		LOG TYPE		WELL SYMBOLS	
—	— SYSTEM BOUNDARY	GR	— GAMMA RAY	⊗	— PLUGGED AND ABANDONED WELL
—	— IMPERFECT INTERWELL CONTACT	SP	— SPONTANEOUS POTENTIAL	●	— PRODUCING OIL WELL
—	— UNIFORMITY	DLL	— DUAL LATEROLOG	⊕	— ABANDONED OIL WELL
—	— FACIES CHANGES	E	— REDUCTION LOG	⊖	— SALT WATER DISPOSAL WELL
—	— JURASSIC UNDIFFERENTIATED	ES	— ELECTRICAL SURVEY	⊙	— INJECTION WELL
Mp	— MISSISSIPPIAN LODGEPOLE FORMATION	BPC	— BOREHOLE COMPENSATED SONIC		
M	— MISSISSIPPIAN	CM-FDC	— COMPENSATED MEDIUM LOG—FORMATION RESISTIVITY LOG		
D	— DEVONIAN	DIL	— DUAL INDUCTION LOG		
S	— SILURIAN	LL	— LATEROLOG		
O	— ORDOVICIAN				

SHEET 3 OF 3



NDGS NO. 10360
HRUBETZ OIL
NO.1 ZURCHER
SWSE SEC. 32, T.160 N., R.81 W.
BOTTINEAU COUNTY

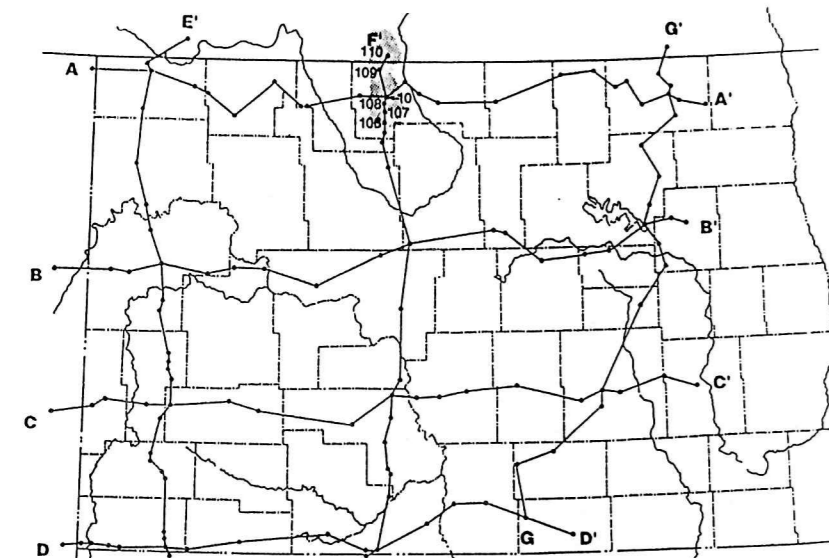
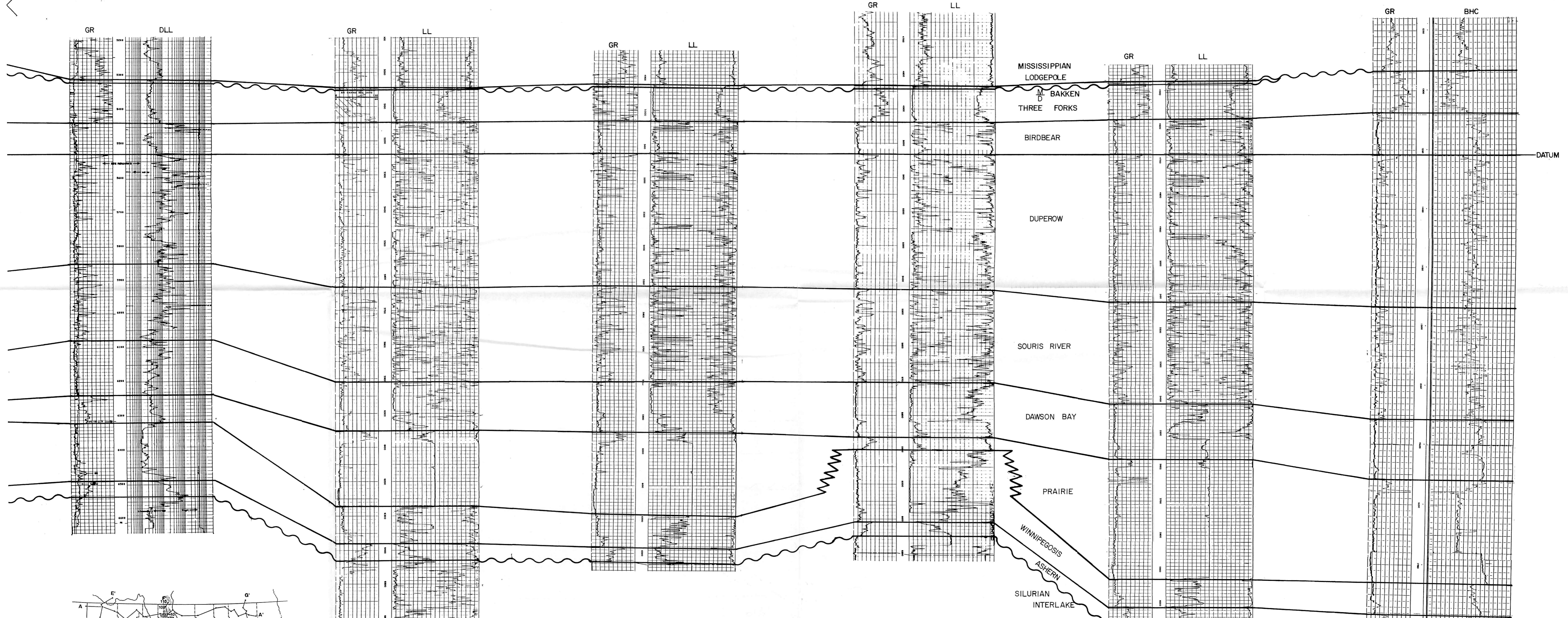
NDGS NO. 4192
CONTINENTAL OIL
NO.1 THOMPSON
NESW SEC. 5, T.160 N., R.81 W.
BOTTINEAU COUNTY

NDGS NO. 4844
GENERAL AMERICAN OIL
NO.1-15 SAUSKER
NESW SEC. 15, T.161 N., R.81 W.
BOTTINEAU COUNTY

NDGS NO. 4924
UNION OIL
NO.1-A-2 HUBER
NENE SEC. 2, T.161 N., R.81 W.
BOTTINEAU COUNTY

NDGS NO. 4846
LAMAR HUNT
NO.1-13 IRENE
NENW SEC. 8, T.163 N., R.81 W.
BOTTINEAU COUNTY

FRANCANA
FRANCANA et al LYLETON
14-15-1-28 W
MANITOBA,
CANADA



CONTACT DESIGNATIONS		LOG TYPE		WELL SYMBOLS	
—	— SYSTEM BOUNDARY	GR	— GAMMA RAY	○	— PLUGGED AND ABANDONED WELL
—	— INFERRED INTERWELL CONTACT	SP	— SPONTANEOUS POTENTIAL	●	— PRODUCING OIL WELL
—	— UNCONFORMITY	DLL	— DUAL LATEROLOG	+	— ABANDONED OIL WELL
—	— FACIES CHANGES	I	— INDUCTION LOG	⊗	— SALTWATER DISPOSAL WELL
Ju	— JURASSIC UNDIFFERENTIATED	ES	— ELECTRICAL SURVEY	⊙	— INJECTION WELL
Mp	— MISSISSIPPIAN LODGEPOLE FORMATION	BHC	— BOREHOLE COMPENSATED SONIC		
M	— MISSISSIPPIAN	Du/ρc	— DUAL-DENSITOMETER NEUTRON LOG—FORMATION DENSITY LOG		
D	— DEVONIAN	DL	— DUAL LOG		
S	— SILURIAN	LL	— LITHOLOGY LOG		
O	— ORDOVICIAN				

G TIE WELL D-D'
SOUTH

73



← 22.2 MILES →

111



← 16.9 MILES →

112



← 29.1 MILES →

113



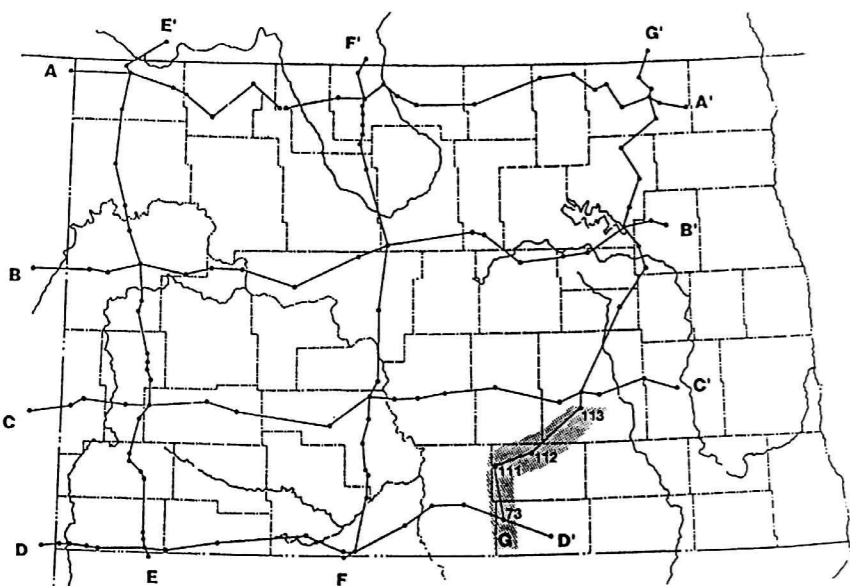
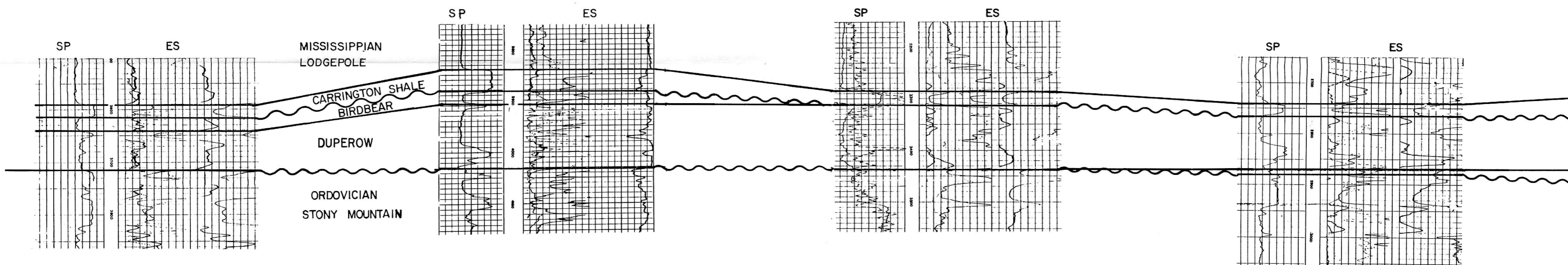
← 7.6 MILES →

NDGS NO. 89
GENERAL ATLAS CARBON
NO. 1 A. KETTERLING
NENE SEC. 15, T. 131 N., R. 73 W.
MCINTOSH COUNTY

NDGS NO. 5523
WISER OIL CO.
NO. 2 et al BALTZER A. WEIGEL NO. 1
NWNW SEC. 29, T. 135 N., R. 73 W.
LOGAN COUNTY

NDGS NO. 1347
CALVERT, LEACH, INTERNATIONAL,
WESTERN
NO. 1 RAY CRAIG
NWNW SEC. 25, T. 136 N., R. 71 W.
LOGAN COUNTY

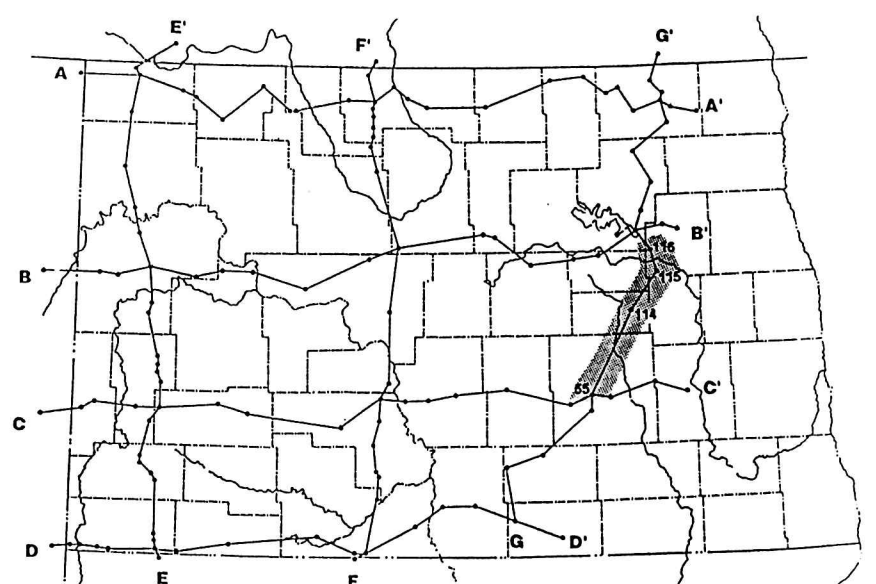
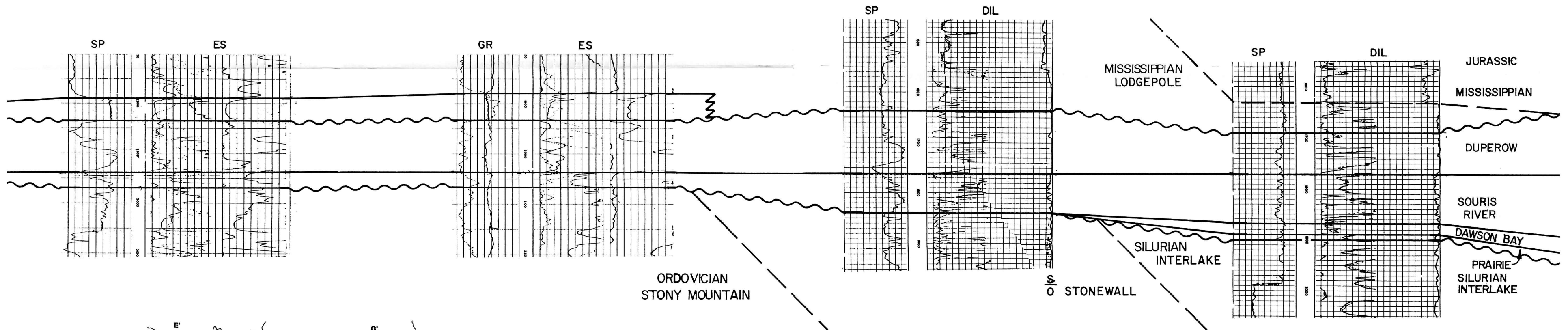
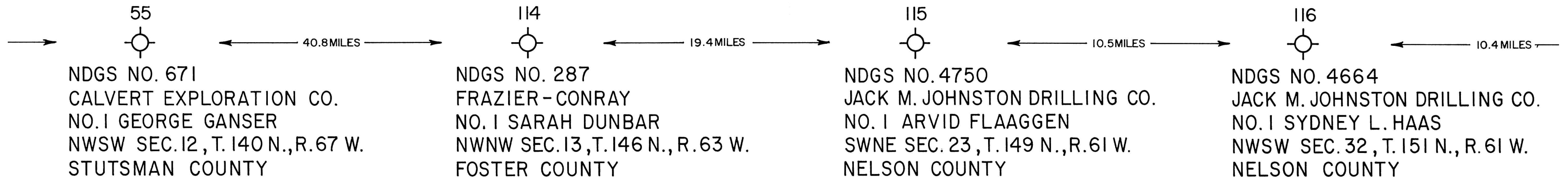
NDGS NO. 670
CALVERT EXPLORATION CO.
NO. 1 D.C. WOOD
SESW SEC. 24, T. 139 N., R. 67 W.
STUTSMAN COUNTY



LEGEND

CONTACT DESIGNATIONS	LOG TYPE	WELL SYMBOLS
S M D — SYSTEM BOUNDARY	GR — GAMMA RAY	○ — PLUGGED AND ABANDONED WELL
— INFERRED INTERWELL CONTACT	SP — SPONTANEOUS POTENTIAL	● — PRODUCING OIL WELL
— UNCONFORMITY	DLL — DUAL LATEROLOG	◆ — ABANDONED OIL WELL
— FACIES CHANGES	IL — INDUCTION LOG	⊕ — SALTWATER DISPOSAL WELL
Ju — JURASSIC UNDIFFERENTIATED	ES — ELECTRICAL SURVEY	⊗ — INJECTION WELL
Mip — MISSISSIPPIAN LODGEPOLE FORMATION	BHC — BOREHOLE COMPENSATED SONIC	
M — MISSISSIPPIAN	CN-FDC — COMPENSATED NEUTRON LOG — FORMATION DENSITY LOG	
D — DEVONIAN	DIL — DUAL INDUCTION LOG	
S — SILURIAN	LL — LATEROLOG	
O — ORDOVICIAN		

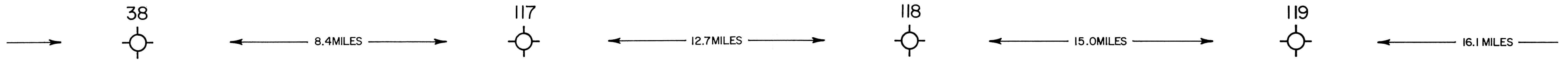
TIE WELL C-C'



LEGEND

CONTACT DESIGNATIONS	LOG TYPE	WELL SYMBOLS
S M O I D	GR - GAMMA RAY	⊙ - PLUGGED AND ABANDONED WELL
— SYSTEM BOUNDARY	SP - SPONTANEOUS POTENTIAL	● - PRODUCING OIL WELL
— INFERRED INTERWELL CONTACT	DLL - DUAL LATEROLOG	◆ - ABANDONED OIL WELL
— UNCONFORMITY	IL - INDUCTION LOG	★ - SALT WATER DISPOSAL WELL
— FACIES CHANGES	ES - ELECTRICAL SURVEY	⊛ - INJECTION WELL
Ju - JURASSIC UNDIFFERENTIATED	BHC - BOREHOLE COMPENSATED SONIC	
Mlp - MISSISSIPPIAN LODGEPOLE FORMATION	CM-FDC - COMPENSATED NEUTRON LOG - FORMATION DENSITY LOG	
M - MISSISSIPPIAN	DIL - DUAL INDUCTION LOG	
D - DEVONIAN	LL - LATEROLOG	
S - SILURIAN		
O - ORDOVICIAN		

TIE WELL B-B'

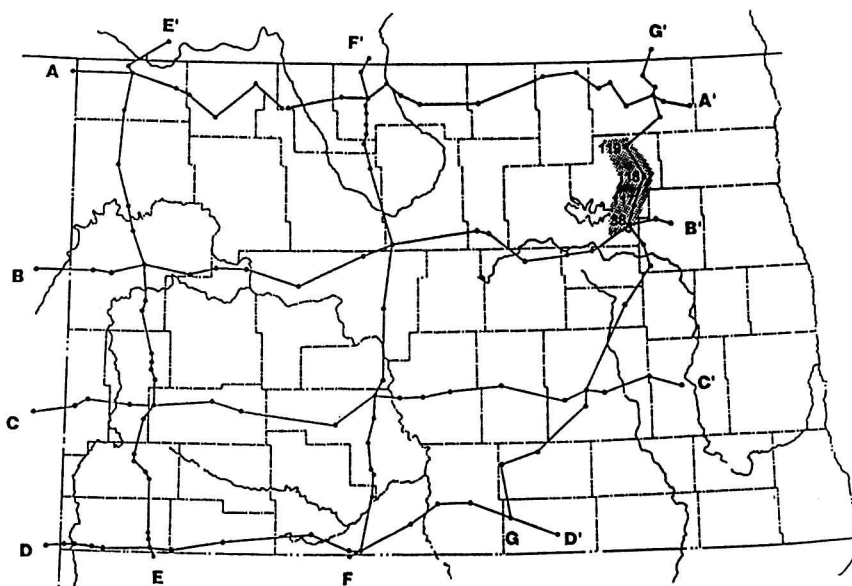
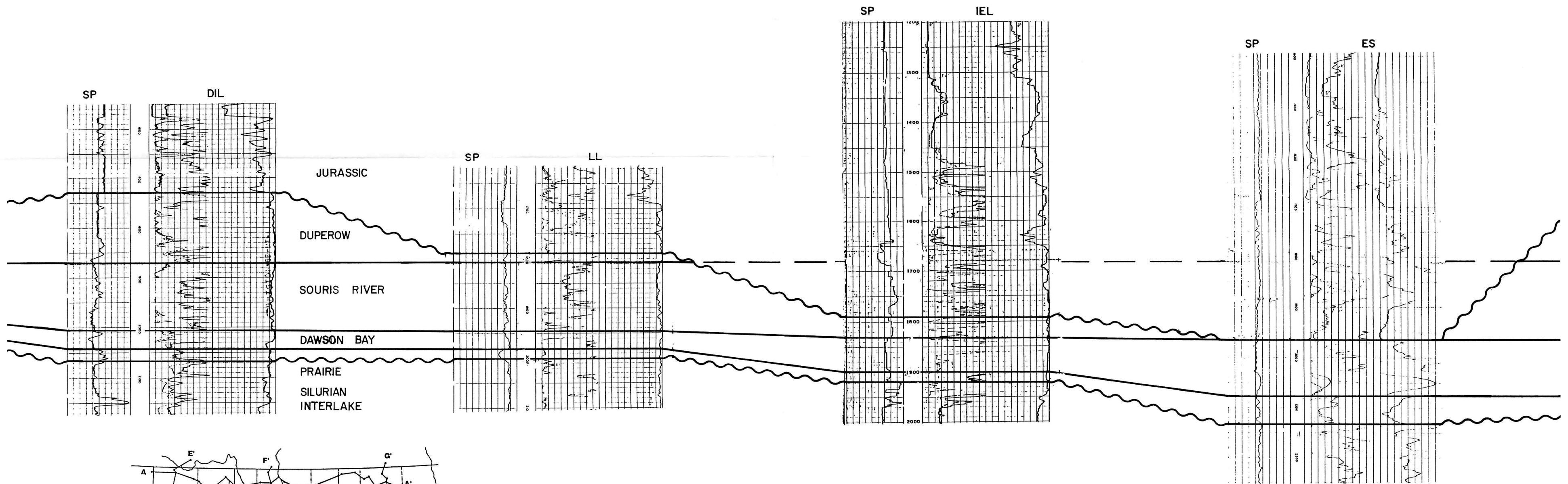


NDGS NO. 4755
 JACK M. JOHNSTON DRILLING CO.
 NO. 1 MORRIS PETERS
 SESE SEC. 17, T. 152 N., R. 62 W.
 RAMSEY COUNTY

NDGS NO. 4783
 JOHNSTON PETROLEUM CORP.
 NO. 1 FRANK HORSTEIN
 NESE SEC. 2, T. 153 N., R. 62 W.
 RAMSEY COUNTY

NDGS NO. 5177
 TEJAS GAS CORP.
 NO. 1 ERWIN LORENZ
 NENW SEC. 3, T. 155 N., R. 61 W.
 RAMSEY COUNTY

NDGS NO. 422
 MCLAUGHLIN INC.
 NO. 1 WOLFE
 NESW SEC. 33, T. 158 N., R. 62 W.
 RAMSEY COUNTY



LEGEND		
CONTACT DESIGNATIONS	LOG TYPE	WELL SYMBOLS
S M O D — SYSTEM BOUNDARY	GR — GAMMA RAY	○ — PLUGGED AND ABANDONED WELL
— — — — — INFERRED INTERWELL CONTACT	SP — SPONTANEOUS POTENTIAL	● — PRODUCING OIL WELL
— — — — — UNCONFORMITY	DLL — DUAL LATEROLOG	◆ — ABANDONED OIL WELL
— — — — — FACIES CHANGES	IL — INDUCTION LOG	◆ — SALTWATER DISPOSAL WELL
Ju — JURASSIC UNDIFFERENTIATED	ES — ELECTRICAL SURVEY	★ — INJECTION WELL
Mp — MISSISSIPPIAN LODGEPOLE FORMATION	BHC — BOREHOLE COMPENSATED SONIC	
M — MISSISSIPPIAN	CM-FDC — COMPENSATED NEUTRON LOG-FORMATION DENSITY LOG	
D — DEVONIAN	DIL — DUAL INDUCTION LOG	
S — SILURIAN	LL — LATEROLOG	
O — ORDOVICIAN		

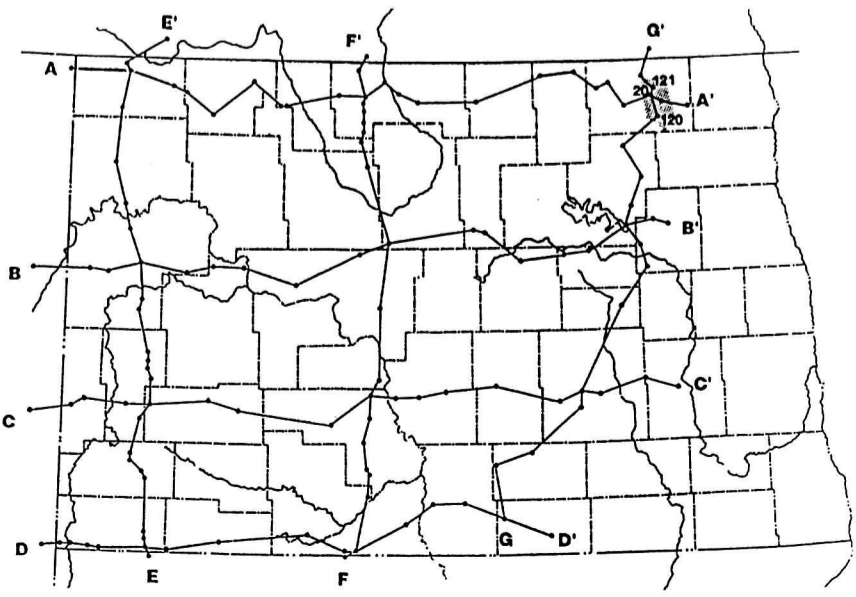
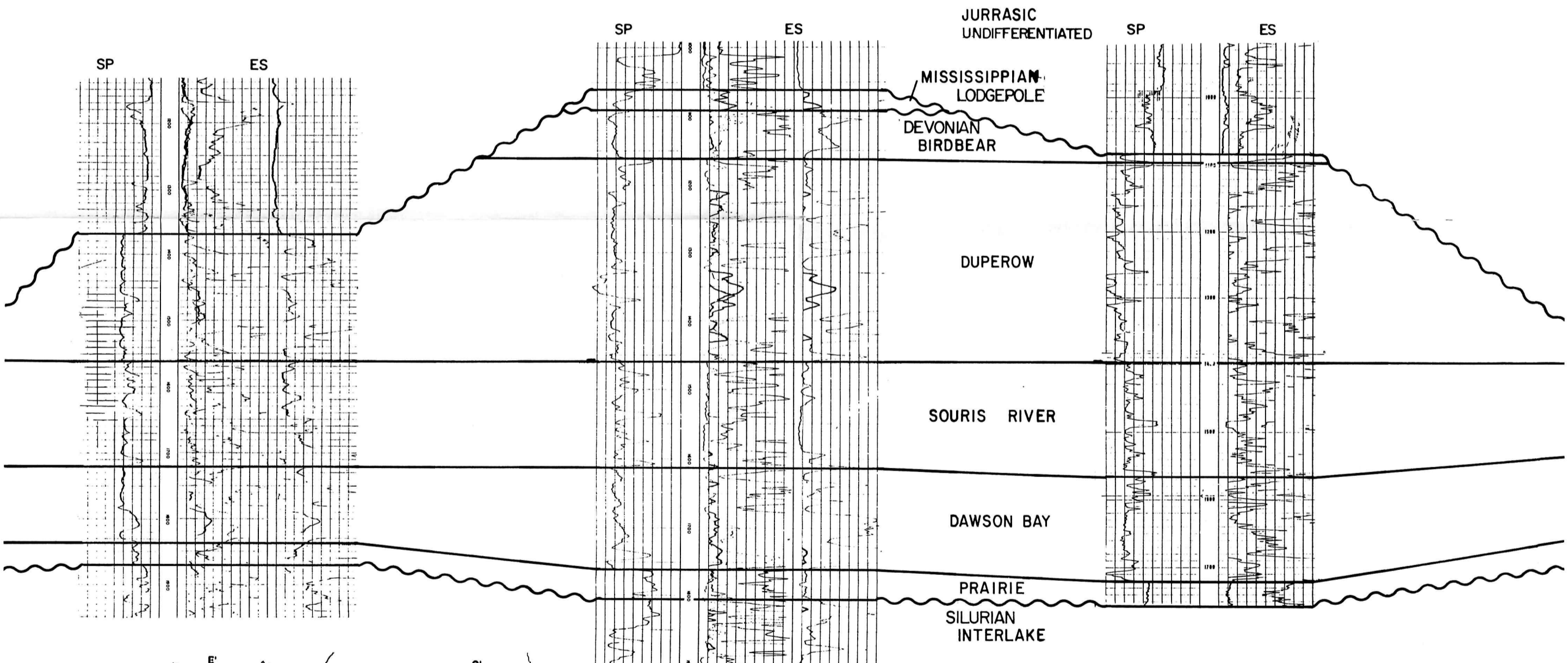
TIE WELL A-A'



NDGS NO. 31
UNION OIL CO. OF CALIFORNIA
NO. 1 LILLIAN WOHLTZ
NWSW SEC. 32, T. 160 N., R. 60 W.
CAVALIER COUNTY

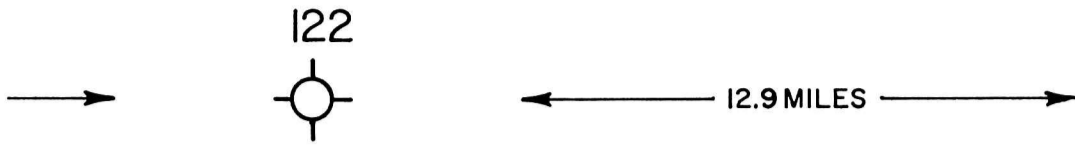
NDGS NO. 36
UNION OIL CO. OF CALIFORNIA -
LOS NIETOS
NO. 1 ELLIS
NWE SEC. 12, T. 161 N., R. 60 W.
CAVALIER COUNTY

NDGS NO. B-12 (Stratigraphic Test)
CARTER OIL CO.
RUEBEN L. RUEGER
SWSW SEC. 30, T. 162 N., R. 59 W.
CAVALIER COUNTY



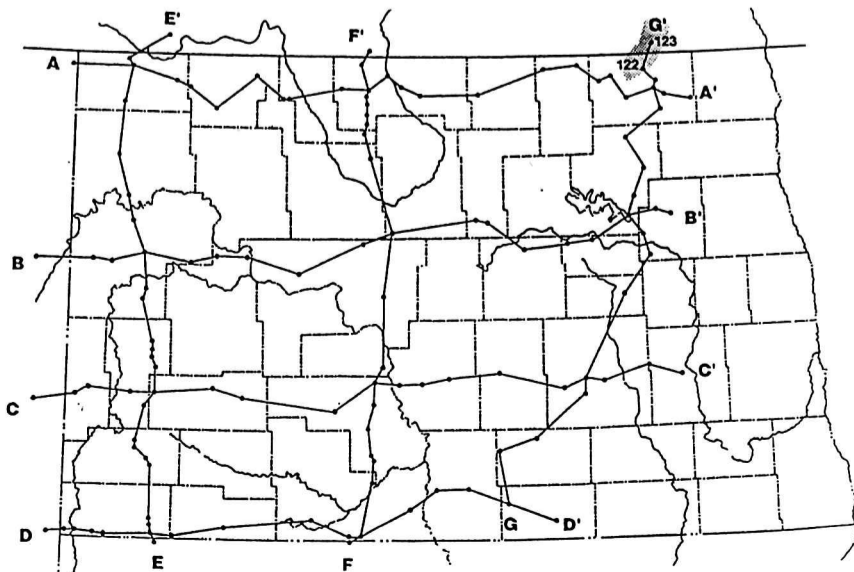
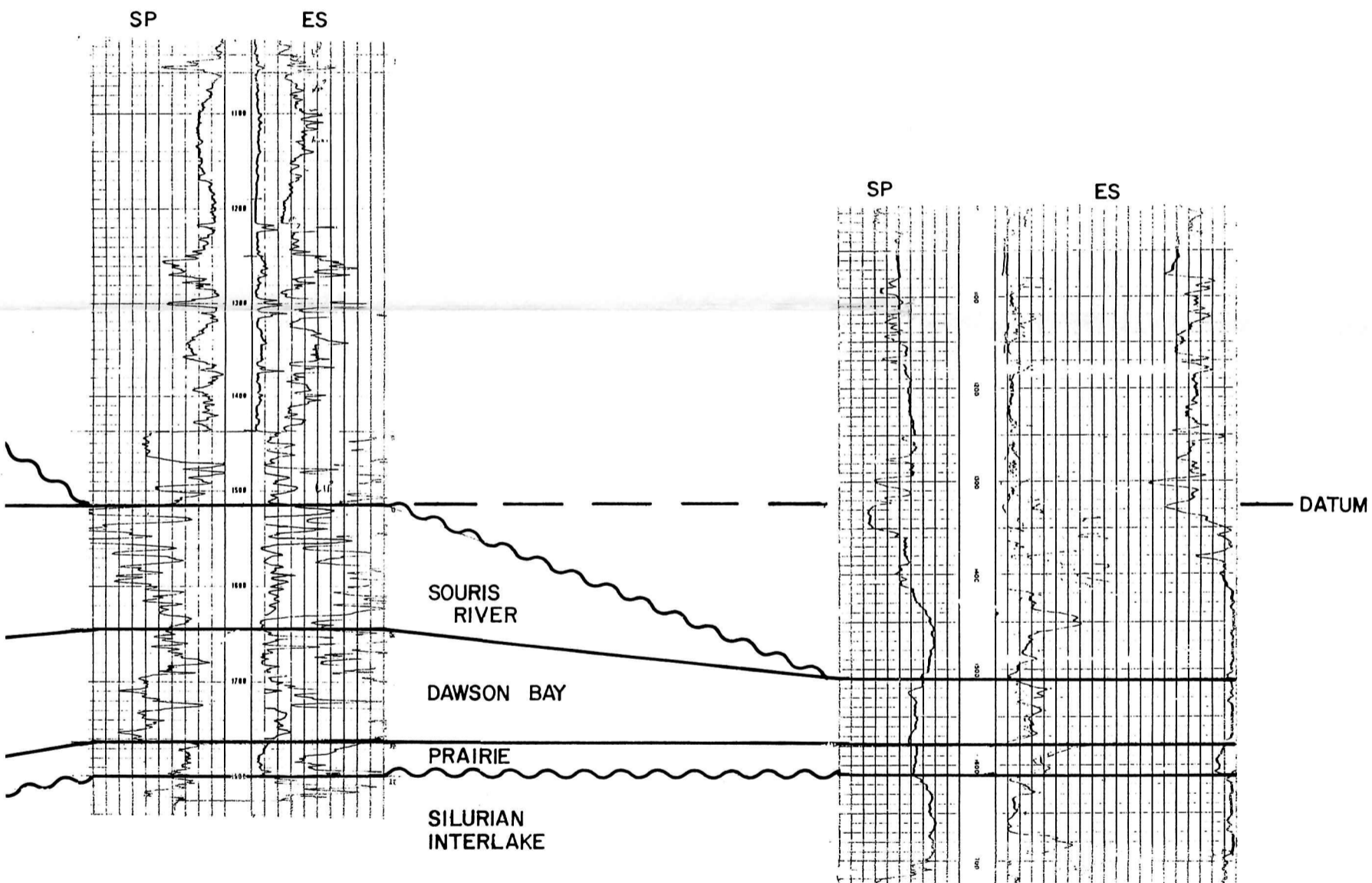
CONTACT DESIGNATIONS		LOG TYPE		WELL SYMBOLS	
	-SYSTEM BOUNDARY	GR	-GAMMA RAY		-PLUGGED AND ABANDONED WELL
	-INFERRED INTERWELL CONTACT	SP	-SPONTANEOUS POTENTIAL		-PRODUCING OIL WELL
	-UNCONFORMITY	DLL	-DUAL LATEROLOG		-ABANDONED OIL WELL
	-FACIES CHANGES	IL	-INDUCTION LOG		-SALTWATER DISPOSAL WELL
Ju	-JURASSIC UNDIFFERENTIATED	ES	-ELECTRICAL SURVEY		-INJECTION WELL
Mp	-MISSISSIPPIAN LODGEPOLE FORMATION	BHC	-BOREHOLE COMPENSATED SONIC		
M	-MISSISSIPPIAN	CNL-FDC	-COMPENSATED NEUTRON LOG-FORMATION DENSITY LOG		
D	-DEVONIAN	DIL	-DUAL INDUCTION LOG		
S	-SILURIAN	LL	-LATEROLOG		
O	-ORDOVICIAN				

G'
NORTH



NDGS NO. B-10 (Stratigraphic Test)
CARTER OIL CO.
ANTHONY HILTNER
SWNW SEC. 31, T.163N., R.60W.
CAVALIER COUNTY

ASAMERA OIL CORP.
ASM BTO et.al. PEMBINA PROV.
1-29-1-7W1
MANITOBA, CANADA



LEGEND

CONTACT DESIGNATIONS

- S M — SYSTEM BOUNDARY
- D — INFERRED INTERWELL CONTACT
- UNCONFORMITY
- FACIES CHANGES
- Ju — JURASSIC UNDIFFERENTIATED
- Mip — MISSISSIPPIAN LODGEPOLE FORMATION
- M — MISSISSIPPIAN
- D — DEVONIAN
- S — SILURIAN
- O — ORDOVICIAN

LOG TYPE

- GR — GAMMA RAY
- SP — SPONTANEOUS POTENTIAL
- DLL — DUAL LATEROLOG
- IL — INDUCTION LOG
- ES — ELECTRICAL SURVEY
- BHC — BOREHOLE COMPENSATED SONIC
- CNL-FDC — COMPENSATED NEUTRON LOG — FORMATION DENSITY LOG
- DIL — DUAL INDUCTION LOG
- LL — LATEROLOG

WELL SYMBOLS

- ⊙ — PLUGGED AND ABANDONED WELL
- — PRODUCING OIL WELL
- ◆ — ABANDONED OIL WELL
- ◆ — SALTWATER DISPOSAL WELL
- ★ — INJECTION WELL