PROJECT ACTION SHEET

RESOURCE EVALUATION BRANCH

PROJECT NUMBER: 9229-85-1E

COMPANY: SULPETRO LTD

REPORT TITLE: GEOPHYSICAL REPORT - TROUT LAKE 1985

The following action has been taken:

Receipt acknowledged ..... ✓

Reports and maps date-stamped ..... ✓

Memo sent to Land Management .....

Reports for review list edited .....

Inventory sheet made ..... ✓

Mylar ..... ✓

REVIEW AND APPROVAL made by: John O'Beirne

85-11-07

COMMENTS:

PROGRAM NUMBER: 9229 - 85 - 1E

YEAR: 85

Filed under same Project Number _____ or _____

(a) WRITTEN REPORTS:

(1) Operations Report — Number: 1

(2) Interpretation Reports — Number: 1

(b) MAPS:

(1) Shotpoint Maps — Number: 1
TROUT LAKE 1:50000

(2) Interpretation Maps — Number: 2
SLAVE POINT TIME STRUCTURE
JEAN MARIE - SLAVE POINT

(3) Other Maps — Number: _____

(c) SEISMIC SECTIONS — Number: 14 (MIGRATED)

85-1
-2
-3
-4
-5
-6
-7
85-8
-9
-10
-11
-12
-13
-14

9229-85-1E

Geophysical Report

TROUT LAKE
NORTHWEST TERRITORIES
9229-85-1E

E.A. NO. 223

TITLE PAGE

Program Number	9229-85-1E
Operators Report Name	Trout Lake Geophysical Survey
Type of Survey	Reflection Seismic
Survey Locality	Trout Lake/ Northwest Territories 60°10' to 60°50' - 120°30' to 121°35'
Year of Field Work	1985
Operator and Partners	Operator - Sulpetro Limited Partners - Atkinson Petroleum Ltd. - Oakwood Petroleum Ltd.
Prime Contractor	Northern Geophysical (1975) Ltd
Exploration Agreements	Land Use Permit - N84B284 Operating Licence - #508 Exploration Agreement - #223
Report By	R.S. Ball (Chief Geophysicist) Dawn Rosine
Report date	November 1985

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ENCLOSURES

Seismic Shotpoint Map

Isochron Map (Jean Marie to Slave Point)

Structure Map (Slave Point)

Correlated Migrated Seismic Sections
(1 print and 1 film of each section)

LINE #	SHOTPOINT #	MILEAGE (Km)	MIGRATED Paper	Film
85-1	101-701	15.4	X	X
85-2	101-733	16.2	X	X
85-3	101-541	11.3	X	X
85-4	101-709	15.4	X	X
85-5	101-712	15.4	X	X
85-6	101-498	9.6	X	X
85-7	115-623	13.0	X	X
85-8	101-513	10.5	X	X
85-9	97-501	10.5	X	X
85-10	101-437	8.4	X	X
85-11	101-579	12.2	X	X
85-12	101-361	6.4	X	X
85-13	101-493	9.6	X	X
85-14	103-733	17.0	X	X

INTRODUCTION

The Trout Lake prospect is located 60°20' - 60°40' North by 120°45' - 121°30' West in the North West Territories.

The Trout Lake Seismic survey was shot at 1200% CDP using a 1 kg dynamite source and a 96 trace DFS-V recording crew.

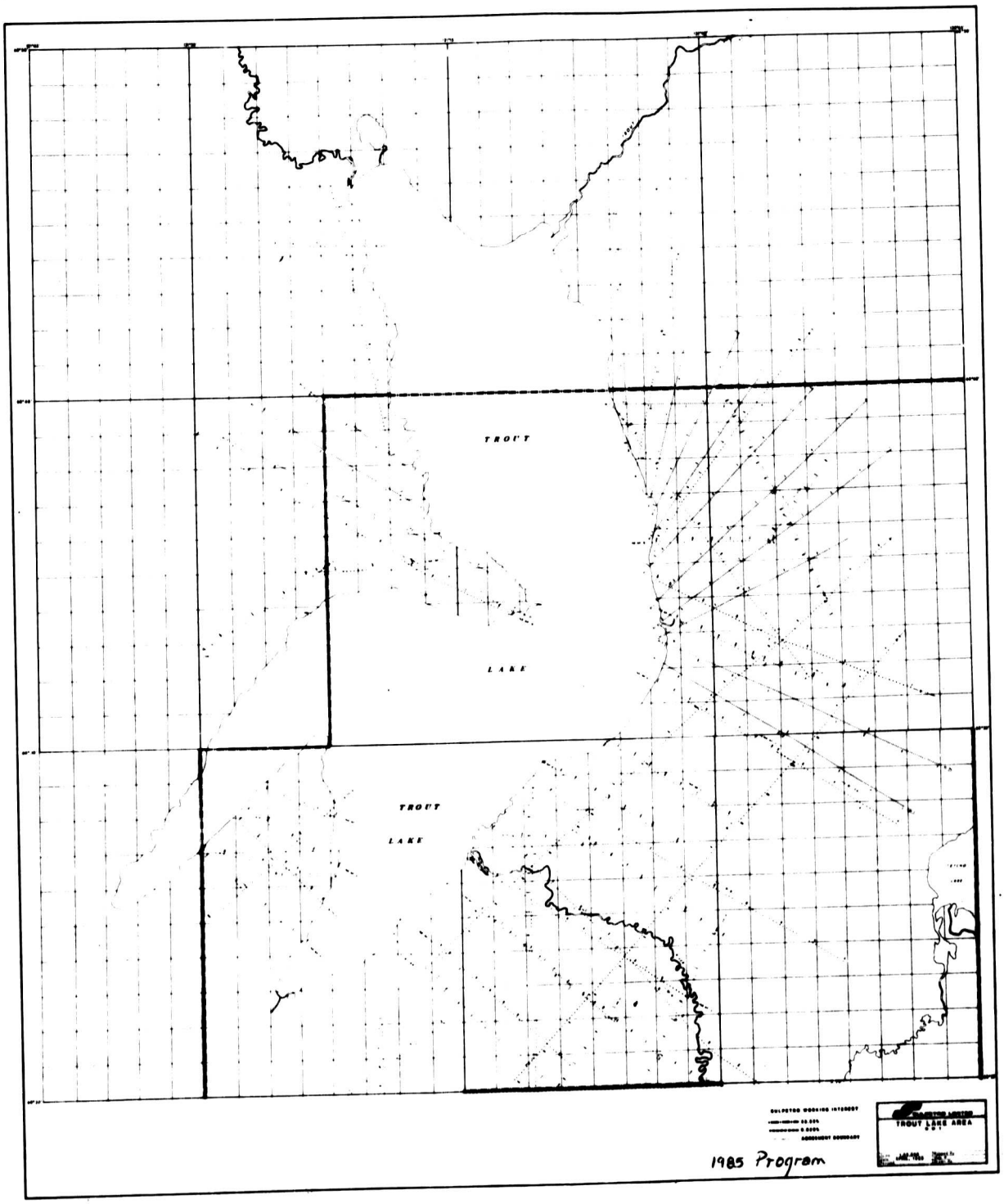
This 1985 seismic survey was designed to confirm our 1981 survey which defined the following:

i) Slave Point Carbonate Bank Edge

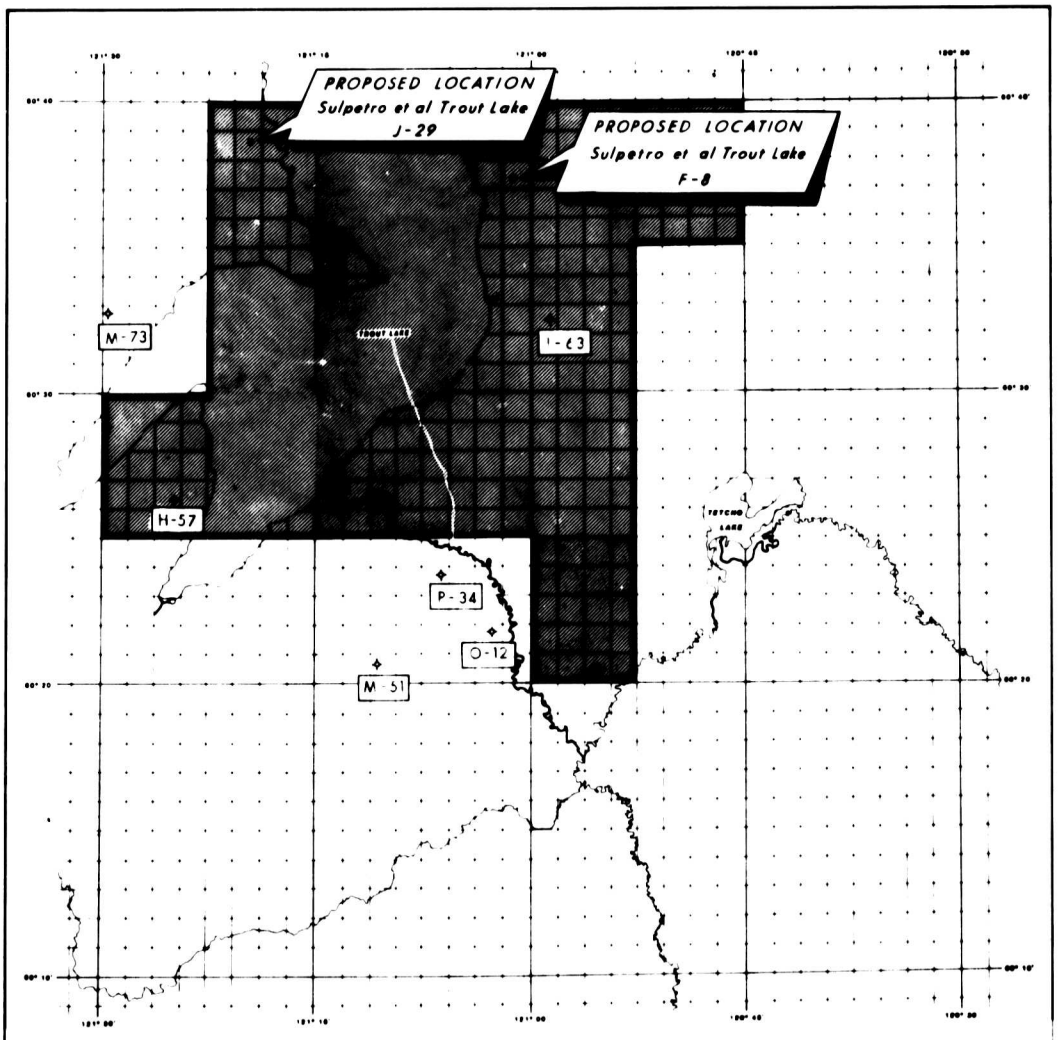
ii) Reef occurences in the Slave Point

iii) Distribution of the Pine Point Dolomite

The shooting took place in the month of March 1985, and was processed in April 1985. Two drilling locations were chosen due to the interpretation of the new seismic.



1985 Program



SULPETRO LIMITED

TROUT LAKE
NORTH WEST TERRITORIES

EA-223

Scale	Mapped By: A S M
Date Oct 85	Map #
Revised	Drawn By A C

STATISTICAL SUMMARY

Field Operating Dates

Commencement - March 1, 1985

Completion - March 30, 1985

Total number of days worked in field - 31

Mileage Breakdown

New cut line - 169.53 km

Existing line - 3.4 km (detour)

Line Total 172.93

Access, detours and campsite - 76.8

Line and Access Total - 249.73

Local Participation

Trout Lake Indian Band was hired by Sulpetro to do all hand slashing and clean-up. All other personnel are Canadian and are listed on Page 8.

Our program was delayed in commencing do to previous surveys conducted by our contractor. However, once the program started on March 1, 1985, no problems were encountered. The weather remained cold enough for the month of March which enabled us to complete 173 kilometers in 31 days.

PERSONNEL

COMPANY:

DENHAM DRILLING - Wetaskiwin, Alberta:

- 4 Drillers
- 4 Drill Helpers

ROY CATT WATER HAULING CO. - Entwhistle, Alberta:

- 1 Water Truck Driver

O.F.R. HOLDINGS LTD. - Calgary, Alberta:

- 3 Surveyors
- 2 Rodmen

NORTHERN GEOPHYSICAL (1975) LTD. - Calgary, Alberta:

- 1 Party Manager
- 1 Assistant Party Manager
- 1 Clerk
- 1 Supply Driver
- 1 Observer
- 1 Junior Observer
- 1 Shooter
- 1 Shooter's Helper
- 3 Line Truck Drivers
- 6 Line Helpers
- 1 Mechanic

CROWN CATERERS LTD. - Calgary, Alberta:

- 1 Cook
- 1 Cook's helper
- 1 Camp Attendent

PICKELL CONSTRUCTION LTD. - Fort St. John, British Columbia:

- 6 Bulldozer Operators
- 1 Cook

TROUT LAKE LODGE - Trout Lake, Northwest Territories:

- 8 Chain Saw Operators

FIELD PARAMETERS
(Data Acquisitions Equipment and Field Procedures)

Survey - Regular survey equipment

Spread [distance/(trace #)] 1225m (1) 50m (48) - SP - 50m (49) - 1225 (96)

Source Interval - 100m

Geophone Group Interval - 25m

Source Type - Dynamite

Geophone Type - L-25 14H^{z}

Sources Layout - Single Holes

Geophone Layout - 9 geophones over 25m

Ave Charge Size - 1 kg

Ave Hole Depth - 15m

Instrumentation - DFSV

Gain Mode - I F.P.

Field Filter - Out / 128 H^{z} Notch In

Coverage - 1200%

Record Length - 3000 msec.

Sample Interval - 2 msec.

PROCESSING PARAMETERS
(Processed by Veritas)

1. Demultiplex

2. Amplitude Recovery - exponential curve

3. Geometry - Straight Line

4. Dephasing - Instrument and Geophone

5. Deconvolution - Spiking

length - 60ms Prewhitening 5%

Filter	Distance	Design Gate	Appl. Gate
1	50m	300 - 1600	0 - 2000 ms
2	1225m	800 - 1700	0 - 2000 ms

6. Residual Amplitude Analysis and Application

7. Structure Statics - 2 Layer Drift Computation
   Datum: 610m A.S.L.
   Replacement Velocity: 2440 m/s

8. Trace Gather

9. Normal Moveout

10. Statics - Automatic Surface Consistent
    Window - 300 - 1500 ms

11. First Break Mutes

Distance	275	1225	2450 m
Mute	320	800	1600 ms

12. Statics Trim
    Correlation Window 400 - 1400 ms

13. Stack

14. Filter - Bandpass
    Filter 1 Pass Band 15/20 - 70/80 Applic. Gate 0-2000ms

15. Amplitude Equalization - Mean Scale
    Window 400 - 1400 ms

16. Migration

DISCUSSION (Maps and Sections)

The enclosed Trout Lake migrated seismic sections are of very good quality, signifying proper field and processing parameters. All sections show strong geological reflectors such as the Jean Marie and Slave Point, making mapping relatively straight forward.

The Jean Marie to Slave Point isochron map and the Slave Point Time Structure map were constructed. These maps show the pertinent geological features in the area: i.e. the Klua Shale Basin, the Slave Point carbonate bank and the fringing gas prone presquile dolomite reef. These features are clearly evident on the enclosed example seismic sections. Time to depth conversion was not done.

Ray Ball, P. Geoph.
Northern Exploration, Sulpetro

SONIGRAM II
VELOCITY ANALYSIS — PART I

LOCATION 60 23 LAT 121 05 LONG P-34

WELL NAME SULPETRO ET AL TROUT LAKE P-34

COMPL. DATE 17 FEB 81 **DATA SOURCE** SONIC LOG

K.B. 1756.9ft. G.L. 1738.8ft. **TD.** 6975.0 ft. **TD.corr.** ft.

K.B. 535.5m. G.L. 530.0m. **TD.** 2126.0 m. **TD.corr.** m.

INTEGRATED FROM 1837.2 ft. **TO** 6955.3 ft. **TOTAL** 5118.0ft.

INTEGRATED FROM 560.0 m. **TO** 2120.0 m. **TOTAL** 1560.0m.

TRADITIONAL UNITS OF MEASUREMENT

GEOLOGIC FORMATION	DEPTH FT FROM KB	ELEVATION FT FROM SEA LEVEL	INTERVAL THICKNESS FT	TRANSIT TIME SECONDS (TWO-WAY)	R.M.S. VELOCITY	HALF VEL. FT PER MSEC (HFT PER SEC)	REFLECT. TIME SECS (TWO-WAY)
	1837	-80					.000
EXSHAW	2461	-704	623.4	.127	9.80	4.898	.127
KOTCHO	2493	-737	32.8	.006	9.84	5.390	.133
TETCHO	3133	-1376	639.8	.116	10.42	5.517	.249
JEANMAR	4183	-2426	1049.9	.153	11.80	6.878	.402
FT SIMP	4242	-2485	59.1	.007	11.91	8.670	.409
MUSKWA	5960	-4203	1717.5	.284	11.99	6.057	.692
SLAVE P	6016	-4259	56.4	.009	12.01	6.625	.701
L ELK P	6824	-4867	607.9	.064	12.73	9.431	.765
CLASTIC	6902	-5045	178.1	.018	12.95	10.087	.783
TD INT	6955	-5198	153.2	.018	13.06	8.641	.801

METRIC UNITS OF MEASUREMENT

GEOLOGIC FORMATION	DEPTH METERS FROM KB	ELEVATION METERS FROM SEA LEVEL	INTERVAL THICKNESS METERS	TRANSIT TIME SECONDS (TWO-WAY)	R.M.S. VELOCITY	HALF VEL. METERS PER MSEC	REFLECT. TIME SECS (TWO-WAY)
	560	-24					.000
EXSHAW	750	-214	190.0	.127	2.99	1.493	.127
KOTCHO	760	-224	10.0	.006	3.00	1.608	.133
TETCHO	955	-419	195.0	.116	3.17	1.683	.249
JEANMAR	1275	-739	320.0	.153	3.60	2.098	.402
FT SIMP	1293	-757	18.0	.007	3.63	2.642	.409
MUSKWA	1816	-1281	523.5	.284	3.66	1.846	.692
SLAVE P	1834	-1298	17.2	.009	3.66	2.019	.701
L ELK P	2019	-1483	185.3	.064	3.88	2.874	.765
CLASTIC	2073	-1538	54.3	.018	3.95	3.074	.783
TD INT	2120	-1584	46.7	.018	3.98	2.633	.801

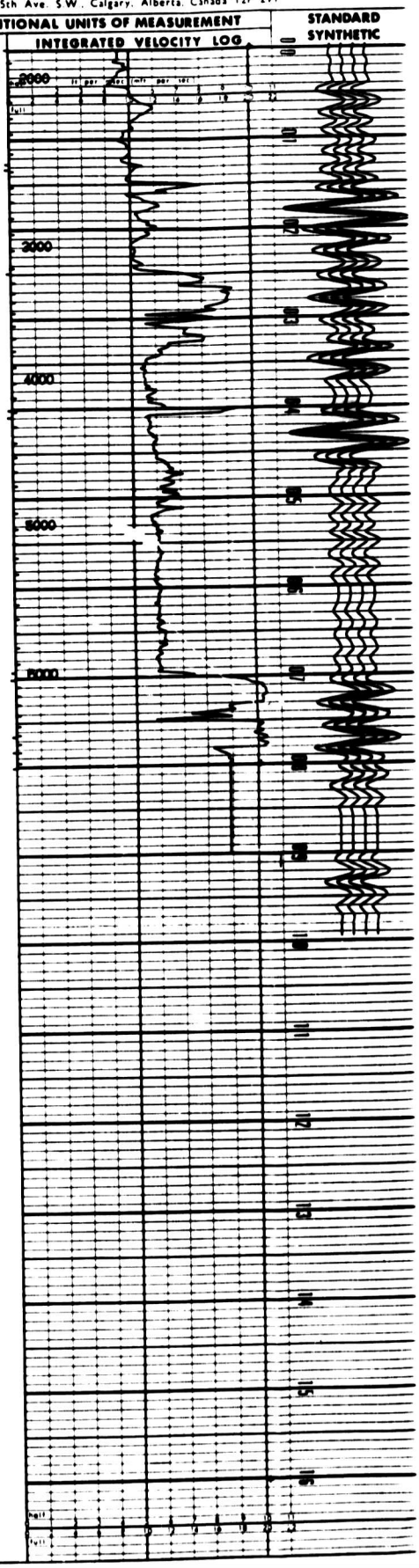
COMMENTS:

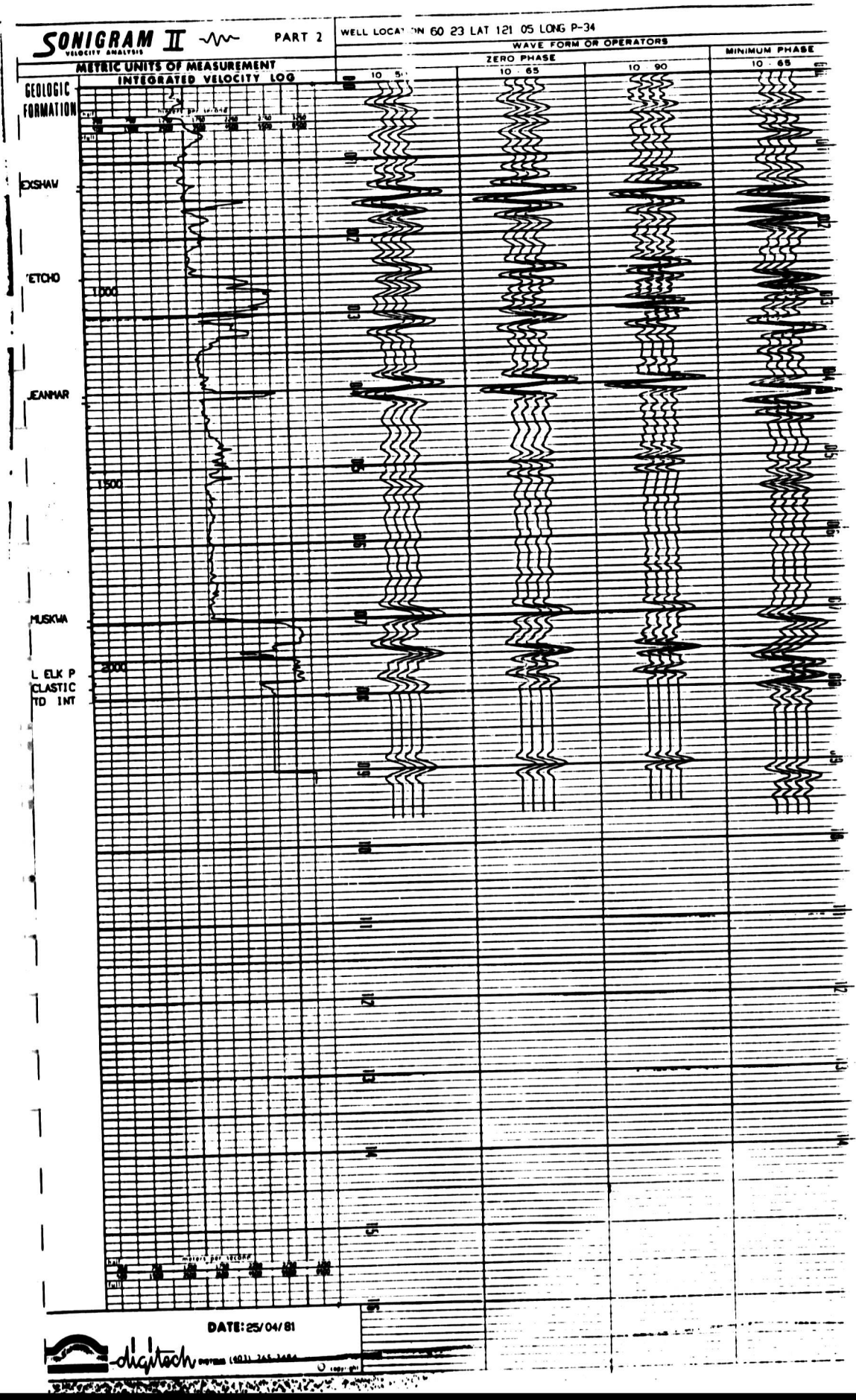
DATE: 25/04/81

digitech SYSTEMS (403) 265-3484

DIGITECH SYSTEMS
500, 441 - 5th Ave. S.W., Calgary, Alberta, Canada T2P 2V1

TRADITIONAL UNITS OF MEASUREMENT — STANDARD SYNTHETIC




SONIGRAM II
VELOCITY ANALYSIS
PART 2
WELL LOCATION 60 23 LAT 121 05 LONG P-34
METRIC UNITS OF MEASUREMENT
INTEGRATED VELOCITY LOG
WAVE FORM OR OPERATORS
ZERO PHASE
10 - 65
10 - 90
MINIMUM PHASE
10 - 65
GEOLOGIC FORMATION
EXSHAW
ETOKO
JEANNAR
MUSKWA
L ELK P
CLASTIC
TD INT
1000
1500
2000
DATE: 25/04/81
digitech