

PAN AM A-1 GRAINGER

J-15

Drilling Authority No. 319

Date Issued 26-6-68

WELL NAME: Ben in 1-2 Granger 1-15

FIELD: Wildcat

Area:

LOCATION: Unit J

Section 15

Grid 61-20 — 123-00

Latitude 61-14-35

Longitude

123-02-40

From Established Reference Marker Line W-66-C Shot Point 81

U.W.I.R. 61.24305 — 123.04444

U.W.I. 300156120123000

Rig Release Date:

Status

Information Release Date

CHANGE OF NAME:

DATE RECEIVED

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24-8-68

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Drilling Authority No. 319
Date issued 8-26-68

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT DIVISION

WELL COMPLETION DATA

To be submitted in duplicate within thirty days after the completion, rework, abandonment, recompletion or suspension of every well.

Well name and number Pan Am A-1 Grainger J-15
Permit No. 4940 Lease No.
Pan American Petroleum Corp. Exploratory Licence No. 1200
(Permitter, Licensee, Lessee)
Pan American Petroleum Corp. Exploratory Licence No. 1200
(Operator)
Location: Unit J Section 15 Grid 61°20', 123°00'
Latitude 61°14'35"N Longitude 123°02'40"W
From Established Reference Marker Line W-66-C Shot Points 31
Universal Well Location Reference 61.24305°N Lat., 123.04444°W Long.

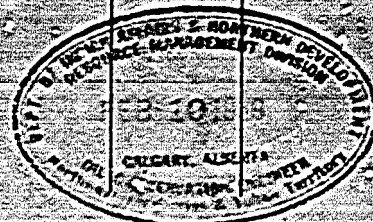
	DATE	DEPTH	Pool(s)
Spudded	10-10-68		Interval(s) open to production NIL
Suspended			
Resumed Operations			
Finished Drilling	10-24-68	2900	
Deepened			Elevation: Gr. 899 K.B. 871
Complete (gas/oil)			Rig No. 38
Abandoned	10-29-68	2900	Drilling Contractor Brinkerhoff Brothers
Rig released	10-29-68		Contractor's Business Licence No. A11157

CASING RECORD

Casing Size (Inches)	Grade	Weight	Amount	Set at -	Sacks of Cement and Additives
1. 7-5/8	N80	29.7	13 Jts.	431	190 Sx. O.W. + 2 1/2
2.					Cascl ₂ from top
3.					w/60 Sx. O.W. + 2 1/2
4.					Cascl ₂
5.					15 Sx. around Casg.
6.					in collar

GEOLOGICAL TOPS	ELEVATION		CORE RECORD					
	Depth	Sub-Sea	From	To	Rec'd	From	To	Rec'd
			1750	1770	20			
			2148	2152	4			
Nahanni	1717							
Manitow	2064							
Arctic	2258							
Cambrian	2965							

LOG RECORD					
Run No.	Type of Log	From	To		
1	Gamma - Caliper	130	2888		
1	I.E.S.	129	2888		
1	Density	1600	2885		
1	Continuous Myster	1600	2885		



CEMENTING RECORD (Plug, Squeeze, etc.)				PERFORMING RECORD (Bulldo, Jet)				SERVICING RECORD (Acidizing, Fracing, etc.)			
Date	From	To	Remarks (1)	Date	From	To	Remarks	Date	From	To	Remarks
10-29-68	2700	2900	Plug #1 65 8x plus 2 1/2 Ocal 2 no feel.				NIL				
10-29-68	1970	2150	Plug #2 75 8x plus 3 1/2 Ocal 2 felt @ 1950' after 8 hours.								NIL
10-29-68	380	480	Plug #3 50 8x plus 3 1/2 Ocal felt @ 375' after 8 hours. Out Osg 3' below gr. level. 5 8x surface plug & 8 more plugs welded on casing.								

DRILL STEM TESTS

No.	Date	Formation	From	To	V.O. Mins.	I.S.L. Mins.	"F.S.L." Mins.	I.S.L.R.H.P.	F.S.L.R.H.P.	L.F.R.H.P.	F.F.R.H.P.	L.H.P.	F.H.P.	REMARKS
1	10-25-68	Calabrian	2834	2900	60	90	60	1199	1207	1136	1207	1213	1221	Blow Dying in 1 Hr. Rec. 2750' Water Misrum Misrum Rec. 270' Water.
2	10-27-68	Manetoe	1985	2130										
3	10-28-68	Manetoe	1728	2144	60	90	90	636	650	97	465	761	747	

ANALYSIS

ANALYSIS					PRESENT STATUS OF WELL	
Lab. No.	Sample	From	To	Source	Remarks	
B68-8272-3	Water	2834	2900	D.T. #1		Oil
B68-8570-3	Water	2144	1718	DST #3		Gas
ONP-4-4443	Core	1750	1770	Core #1		
						Dry
						Abandoned
						Susp.

Forms to be prepared in duplicate and forwarded to the Oil Conservation Engineer, Calgary, Alberta.



File No.
Drilling Authority No. 319

DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT DIVISION

Application to Abandon a Well ~~or Suspend Drilling~~

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to abandon, to suspend drilling—

Name and number of well **Pen Am A-1 Granger J-15**

Location: Unit **J** Section **15** Grid **61°20' 123°00'**

Latitude **61°14' 35" N** Longitude **123°03' 40" W**

From Established Reference Marker **Line W-66-C Shot Point 81**

Universal Well Location Reference **61.24305° N Lat., 123.04444° W Long.**

Permit No. **4940** Lease No.

Pen American Petroleum Corporation

(Operator, Lessee, Lessor)

Date of commencement of proposed program **October 28, 1968**

OIL, GAS, AND WATER ENCOUNTERED
(Depths)

Oil at **NIL**

Gas at **NIL**

Water at **DST#1 (1836-2900) DST#3 (1718-2111)**

Total Depth **7900** Date of last operations **10-27-68**

Present condition of well **No evidence of commercial production**

CASING RECORD

Casing Size (O.D. inches)	Weight	Amount	Set As	Series of Cement and Additives	Amount Filled
1. 7-5/8"	240	14 Jts	431	180 Sx O.N. +2-1/2X	NIL
2.				Cas₂, from top	
3.				W/50 Sx O.N. +2X	
4.				Cas₂	
5.				Reconcreted with 15 sacks cement around casing in collar.	

PROPOSED ABANDONMENT PROGRAM

No.	Depth	Geological Formation	Number of Sacks of Cement	Remarks
1.	2700-2900	Cambrian	65	No feel.
2.	1950-2150	Manitou	75	Felt @ 1950
3.	300-400	Casing Shoe	50	Felt @ 375

Cnt. top of Cas. w/5 sacks, weld on plate, install marker.

The following logs have been run **Log, Cont. Dipmeter, Density, Gamma Ray - Caliper**

Other operations proposed.

Operations to be carried out by **Brikerhoff Bros.**

Address **280 Montell Building, Calgary, Alta.**

Contractor Licence No. **28 A11157**

Address

Responsible Agent in field **Mr. J.A. Schreff**

Dated at **Calgary, Alberta**

this **28**

Day of **October**

1968

Signed by **[Signature]**

Company

Pen American Petroleum Corporation

Title **Area Foreman**

Operator's Explocatory Licence No. **1200**

Note—The Oil Conservation Engineer's office must be notified before work is commenced.

(For RESOURCE MANAGEMENT DIVISION use only)

APPROVAL

This application has been examined and proposed programme approved, subject to the following conditions:

Confirming oral approval given by Mr. B.H.J. Thoms on
the 28th of October 1968.

Dated **4th November** 19 **68**

[Signature]
Oil Conservation Engineer

Forms to be submitted in triplicate to Oil Conservation Engineer,
Department of Indian Affairs and Northern Development, Calgary, Alberta.

Drilling Authority No. 319

Project No.

File No.



DEPARTMENT OF INDIAN AFFAIRS AND NORTHERN DEVELOPMENT
RESOURCE MANAGEMENT DIVISION

Application for a Drilling Authority

This notice of intention to begin drilling operations, in triplicate, and where required a plan of survey approved by the Surveyor General showing the target area or the site of the well must be submitted and approved before commencing operations.

In compliance with the "Canada Oil and Gas Land Regulations", application is hereby made for approval to drill —

Name and number of well **Pan Am A-1 Granger J-13**

Location: Unit **J** Section **13** Grid **61° 20' 123° 00'**

Latitude **61° 14' 35" N.** Longitude **123° 02' 40" W.**

From Established Reference Marker **Line V-65-C Shot Point: 61**

Universal Well Location Reference **61.2035° N. Lat. 123.0444° W. Long.**

Elevation: Ground **859.0'** K.B. **—** feet above sea level.

Well is expected to produce from **Elk Point** formation at a depth of about **—** feet.

Expected total final depth **2500 Ft.**

Area assigned to well **—**

(For Oil Conservation Engineer's use only)

Permit No. **4948** Lease No. **—** Acreage **61.996**

Permittee, licensee, or leasee **Pan American Petroleum Corporation**

Exploratory Licence No. **1130**

Surface owned by Crown or **Crown**

Petroleum and natural-gas rights owned by **Crown**
(If different, submit name and address of owner and occupant.)

We propose to use the following strings of casing, either cementing or landing them as indicated below:—

Casing Size, O.D. (Inches)	Weight (Lb./Ft.)	Grade	New or Used	Estimated Depth	Kind of Cement
1. 7 5/8	299	H-80 LTAC	New	300	To surface
2. 4 1/2	9.54	J-55 LTAC	New	2500	Comply/Regulations
3.					
4.					
5.					

Expected water, gas, and oil horizons and type of control equipment

Hydril and double gate Shaffer with hand controls and hydraulic controls with remote control panel

Well will be drilled with Rotary Rig No. **38** by **Brinkerhoff Bros.**

(Drilling Contractor or company)

Responsible agent of applicant:—

At well **J.A. Scherff**

Address **9916A Richmond Ave**

Contractor's Business Licence No. **A11157**

At registered office **Same**

Address **Same**

It is understood that if changes become necessary, notice of the change of plan will be submitted.

Dated at **Grande Prairie** this **21** day of **August** 19 **68**

Signed by **Joseph Miller** Company **Pan American Petroleum Corp.**

Title **Drilling Foreman** Operator's Licence No. **130**

(For Resource Management Division use only)

APPROVED

This application has been examined and approved subject to the following conditions:—

The Company will submit to this office, on Tuesday of each week, the latest reports received by radio on the progress of the well.

Dated **26th August** 19 **68**

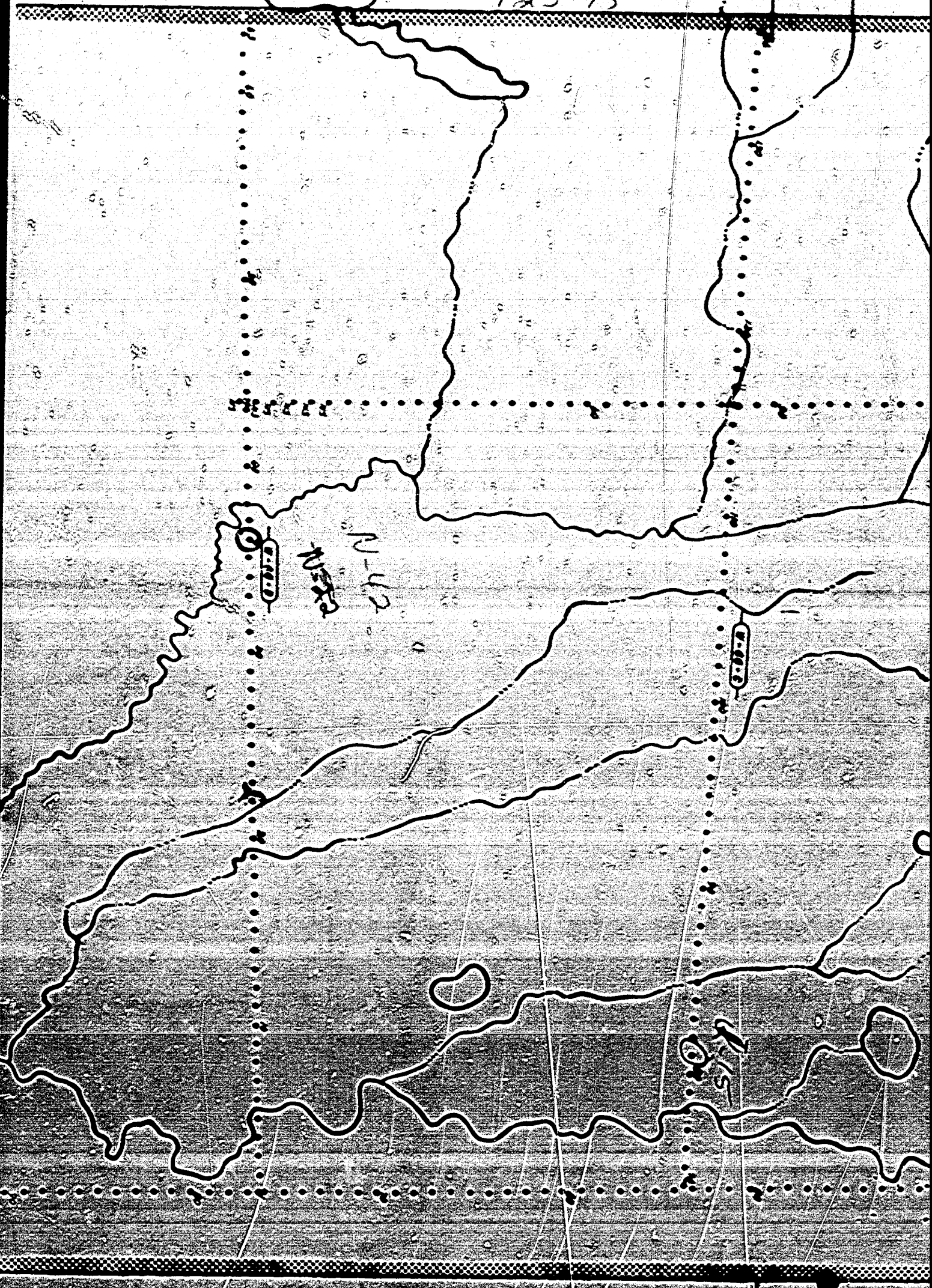
Oil Conservation Engineer

Forms to be submitted to Oil Conservation Engineer,
Department of Indian Affairs and Northern Development, Calgary, Alberta.

IAND 52-90-1 (3-67)

UNIT-13 WELL IDENTIFIER: **3007156120123000**

123° 15'



6115:00

FIELD HISTORY

REPORT

PAN AM A-1 TRAINING

1-15

UNIT 3000, 1000 013 20' W 1210

WESTERN TERRITORIES

FIELD HISTORY
1945-1950

PLAN OF A-1 CHAIN

UNIT NO. 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

NORTHWEST TERRITORIES



Well Depth 2750'

Plug Back Depth - production casing run

(n) Well Status
Well Abandoned

(o) Well Released
10-29-68

(p) Hole Size
9 7/8" 0-431
6 3/4" 431-470

(q) Casing
Casing Size: 3 5/8"
Grade: N-80
Weight: 29
Amount: 13 TS
Set At: 421

*with 150 sacks cement + 2 1/2% CaCl₂
Sealed by 10 sacks cement + 2 1/2% CaCl₂
15 sacks around casing in collar*

SECTION 11

GEOLOGICAL SUMMARY

(a) Formation Tops
Nahanni Limestone 1717'
Manetoe 2064'
Arniea 2258
Cambrian 2865

(b) Cored Intervals
#1 1750-1770 Nahanni Rec. 20'
#2 2148-2152 Manetoe Rec. 4'

(c) Core Description
See Attachment

(d) Sample Description
See Attachment

SECTION III

ENGINEERING SUMMARY

(a) Well Test Data - Report Attached

Well # 10-28-68 (2134-2900) Cambria
 Preflow 5 min. I.S.L. - 90 Min. T.O. - 60 Min.
 F.S.L. - 90 Min. blow down in 1 hr. rec. 2750'
 water - 1199 F.S.L.P. - 1207 F.F.P. - 1207
 I.H.P. - 1213 F.H.P. - 1221

Well # 10-28-68 (198-2130) Manetoe misrun

Well # 10-28-68 (1718-2144) Manetoe
 Preflow 5 min. I.S.L. - 90 Min. T.O. - 60 Min.
 F.S.L. - 90 Min. Rec. 970' water
 F.S.L.P. - 656 F.S.L.P. - 650 F.F.P. - 67
 I.H.P. - 665 F.H.P. - 761 F.H.P. - 747

(b) Casing Record

Conductor Pipe

Nil

Surface Casing

Hole size 9 7/8"

Casing size 7 5/8"

Weight 296

Grade N-80

Joints run 13

R.B. setting depth 51

Cement & additives - 180 sxs plus 2 1/2% CaCl₂

from top w/ 60 sxs 2% CaCl₂. 15 sx around csg in collar

Date run 10-13-68

Date Cemented 10-13-68

Intermediate & Production Casing

Nil

Bin	Size	Type	Mat.	In	Out	Wt.	Prs.
1A	9 7/8	YTA	Sec.	0	42	42	3
2A	9 7/8	YTA	Reed	42	322	280	16 1/4
3A	9 7/8	YTA	Sec.	322	421	101	16
1	6 3/4	YTB	Reed	401	1014	612	23 3/4
2	6 3/4	YTB	Reed	1013	1514	501	5
3	6 3/4	YMB	Reed	1514	1668	152	12 3/4
4	6 3/4	H7UG	Sec.	1668	1714	46	6
5	6 3/4	X55R	Hughes	1714	1750	36	6
coring	6 11/16	Christensen		1750	1770	20	7 1/2
6	6 3/4	H7UG	Sec.	1770	1805	35	6 1/4
7	6 3/4	YMG	Reed	1805	1936	131	13
8	6 3/4	YHMG	Reed	1936	2024	88	7 3/4
9	6 3/4	X55R	Hughes	2024	2148	124	2 1/4
coring	6 11/16	Christensen		2148	2192	4	3 1/2
10	6 3/4	SC4G	Reed	2192	2387	235	19 1/2
11	6 3/4	H7UG	Sec.	2387	2460	72	7 1/2
12	6 3/4	FBC4	Reed	2460	2731	271	33 1/2
13	6 3/4	FBC4	Reed	2731	2900	159	18 1/4

(d) Mud Report

Super Col. Gel 48 sxs
Caustic 1 sx

(f) Deviation Record

Depth	Deviation (Degrees)
0	3/4
10	3/8
20	2
50	2
100	2 1/8
150	3
200	6
250	6
300	5 1/4
350	5
400	4 1/4
450	4
500	5
550	5
600	5 1/4
650	5 1/2
700	5
750	5 1/8
800	5 1/2
850	6
900	6 1/2
950	6
1000	6 1/4
1050	3/4

(f) Abandonment Plugs

Plug #1 10-29-68 (2700-2900) 65 sx plus 27 CaCl₂ no feel
 Plug #2 10-29-68 (1970-2150) 75 sx plug 32 CaCl₂ felt at 1950' with 10,000 lbs.

Plug #3 10-29-68 (380-480) 50 sx plus 32 CaCl₂ felt at 375' with 5,000 lbs

(g) Lost Circulation Zones

1. Formation

Zone

Depth -2020

Amount of Material Lost N/A

Corrective Measures None, small zone

cut off casing 3' below ground level, run 5 sacks cement with 1/2" sand plate welded on casing

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Section I

Section I

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Section II

Section II

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Section II

Section II

Section II

Section III

Section III

WILL HISTORY

REPORT

PAN AM A-1 CRANIER

1-15

UNIT 1 SHEET 15, GRID 61° 20' N 123° 00' W

NORTHWEST TERRITORIES

By:

R.D. Torgerson

Petroleum Engineer S.C.

Approved by:



A.F. Nolan

Area Foreman



PAN AMERICAN PETROLEUM CORPORATION

444 - 7th Ave. S.W.

Calgary 2, Alberta

November, 1968

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ATTACHMENTS

Core Description
Sample Description
Core Analysis
Water Analysis

SECTION 1

SUMMARY OF WELL DATA

- (a) Well Name and Number
Pan Am A-1 Grainger 3-15
- (b) Permittee
Pan American Petroleum Corporation
- (c) Operator
Pan American Petroleum Corporation
- (d) Location
1-15 Grid Area 61°20' 123°00'
Lat. 61°14'35" N Long. 123°02'40" W
Universal Well Location Reference
Lat. 61°22'305" N Long. 123.04444° W
Unique Well Location
300115612012300
- (e) Co-ordinates
nil
- (f) Permit No.
4040
- (g) Drilling Contractor
Name: Brinkerhoff Bros. Ltd.
Rigs: 38
Type: Rotary
- (h) Drilling Authority
#319
8-26-68
- (i) Classification
Exploratory Outpost
- (j) Elevations
Ground: 859'
K.B.: 871'
- (k) Spudded
10-10-68
- (l) Completed Drilling
10-24-68

PAN AM A-1 CRANIER

J-15

UNIT I SECT. 15, GRID 61° 20' N 123° 00' W

SAMPLE AND CORE DESCRIPTIONS

0	-	10	No Sample
10	-	160	Sand, unconsolidated, mostly quartz, also feldspar, mica, chert, rock fragments, fine grained to granular, with pebbles and boulders.
160	-	180	No samples. Last circulation.
180	-	370	Sand, gravel, boulders as above.
370	-	380	40% sand, etc. as above. 60% shale, medium to very dark grey, partly silty and micaceous.
380	-	430	Shale as above, mostly medium grey, with sand cavings. <u>NOTE:</u> Set 7-7/8" casing at 430'.
430	-	480	Shale, mostly very dark grey to black, micaceous, trace pyrite.
480	-	510	Shale as above, medium dark to very dark grey, micaceous, slightly silty.
510	-	690	Shale, uniformly medium dark grey, micro-micaceous, very slightly calcareous, very slightly silty, traces of pyrite, fissile to slightly flaky.
690	-	1290	Shale as above - has become non-calcareous, rare traces of dolomite and anhydrite in fine fractures at 1170' - 1180', traces of slickensides; 1170' - 1200' trace of dolomite, medium brown, soapy and trace of slickensides; 1210' - 1290' trace of slickensides.
1290	-	1300	Shale as above, trace vein dolomite, coarse crystalline, white, trace pyrite, trace slickensides.
1300	-	1380	Shale as above, trace slickensides.
1380	-	1390	Shale, 30% as above. Shale, 70% black, apparently carbonaceous, with abundant black carbaceous flecks, apparently slightly silty and micaceous, friable.
1390	-	1400	Shale, 80% black, 20% grey, trace of pyrite clusters.
1400	-	1430	Shale, 60% black, 40% grey, trace of pyrite clusters.
1430	-	1470	Shale, 80% black, 20% grey, trace of pyrite clusters.
1470	-	1510	Shale, almost all black micro-micaceous, carbonaceous, trace of pyrite clusters.

- 1510 - 1520 Shale as above, trace white crystalline calcite veining and slickensides.
- 1520 - 1540 Shale, 80% medium grey as above, 20% black, increase of white calcite in fine stringers and increase in slickensides.
- 1540 - 1550 Shale, 60% grey, 40% black, trace calcite veining.
- 1550 - 1560 Shale, 60% black, 40% grey.
- 1560 - 1570 Shale, 80% black, 20% grey, increase in pyrite content.
- 1570 - 1590 Shale, 60% black, 40% grey, scattered pyrite and calcite veining.
- 1590 - 1600 Shale, 80% black, 20% grey, calcite veining and pyrite as above.
- 1600 - 1610 Shale, 50-50, calcite and pyrite traces as above, trace slickensides.
- 1610 - 1640 Shale, 70% medium grey as above, 30% black, trace slickensides, calcite and pyrite.
- 1640 - 1650 Shale, 60% grey, 40% black.
- 1650 - 1660 Shale, 60% brown, slightly silty, micro-micaceous, non-calcareous, flaky; Shale, 40% medium dark grey, trace calcite veining and slickensides.
- 1660 - 1670 Shale, grey, 100%, trace calcite veining.
- 1670 - 1680 Shale, grey, 60%; Shale, black siliceous, very hard in part, micro-micaceous, blocky 20%; vein material 20%, mostly white and clear calcite, also clear and white quartz with abundant pyrite. Some open fissures indicated by beautifully formed fine clear quartz crystal clusters.
- 1680 - 1690 Shale, 90% grey, 10% black, hard as above - minor vein material.
- 1690 - 1710 Shale, 80% grey; 20% calcite and quartz vein material with abundant pyrite and trace black siliceous Shale.
- 1710 - 1720 100% vein material - white and clear crystalline calcite and quartz with inclusions of black siliceous Shale, some pyrite mineralization.
- 1720 - 1730 40% vein material as above, 40% Limestone, medium to dark grey, very fine - fine crystalline with scattered quartz crystal growths included - euhedra suggest some vuggy porosity.
- TOP OF NAHANNI ⁺1725'
- 1730 - 1740 Limestone, medium - mostly dark grey, crypto - very fine crystalline, inclusions of quartz crystals as above, dense and tight - 10 - 20% vein material, quartz, calcite and pyrite.
- 1740 - 1750 Limestone as above, mostly dark grey with calcite veining and included bioclastic material including crinoids.

PAH AM A-1 GRAINGER

J-15

UNIT J SECT. 15, GRID 61° 20' N 123° 00' W

CORE #1	1750' - 1770'	Cut 20', Recovered 18'
1750 - 1770	Limestone, very dark grey - black, cryptocrystalline to very fine crystalline, very slightly argillaceous, slightly bioclastic - brach fragments, crinoids - some zones with broken fossil debris concentration; small pyrite euhedra, disseminated rarely throughout few stylolites; some fracturing with white calcite vein filling; scattered irregular patches and blebs of Limestone, medium dark grey, fine crystalline, dense; many depositional and/or flow structures present - wavy bedding, etc.; no porosity; massive - no dip evident, but way core breaks indicates dip essentially flat.	
1770 - 1780	Limestone as above; Shale 15% caving?	
1780 - 1790	Limestone as above 70%; 30% vein material - calcite - minor quartz and pyrite.	
1790 - 1800	Limestone as above, 30% with abundant acicular quartz crystal inclusions; 70% vein calcite quartz and pyrite.	
1800 - 1810	80% limestone as above, 20% vein material.	
1810 - 1840	Limestone 90%; vein calcite, pyrite 10%.	
1840 - 1860	Limestone 80%; Shale, medium dark grey and minor black 20%, caving?, slight calcite veining - scattered quartz crystals in limestone throughout.	
1860 - 1870	Shale, medium dark grey 50%; Limestone, as above, 50%.	
1870 - 1880	Shale, 70%, medium dark grey, fissile, slightly splintery, Limestone 30%.	
1880 - 1890	Shale, 80%; Limestone 20%.	
1890 - 1910	Shale, 70%; Limestone 30%.	
1910 - 1930	Shale, 90% - 10% Limestone (caving?) and calcite veining.	
1930 - 1940	Shale as above, trace Limestone.	
1940 - 1950	Shale, 80%; Limestone, dark grey, crypto-microcrystalline, dense, mottled medium grey and brown.	
1950 - 1990	Shale as above 100% micromicaceous.	

- 1990 - 2000 Shale as above, 80%; Limestone, dark grey, cryptocrystalline, dense, 20%, trace pyrite, calcite veining slickensides.
- 2000 - 2010 Shale, 90%; Limestone, 10%, trace pyrite and calcite.
- 2010 - 2020 Shale, 100%, several fragments clear quartz, trace pyrite.
- 2020 - 2030 40% Quartz veining clear, very coarse crystalline.
30% silicified black Shale and quartz, intimately mixed, very heavily mineralized with pyrite.
30% grey Shale, trace chalcopryrite.
- 2030 - 2040 Limestone, dark grey - very dark grey, predominantly crypto-crystalline, dense, partly fine crystalline with disseminated acicular quartz and pyrite crystals, tight, trace clear vein quartz; trace very fine vuggy porosity.
- 2030 - 2050 Limestone as above, with quartz inclusions, 5% white vein calcite.
- 2050 - 2060 30% Limestone.
70% vein material - quartz and pyrite, minor calcite.
- 2060 - 2070 30% quartz and pyrite vein material as above.
70% Dolomite - white, milky, very coarse crystalline, some dark inclusions.
- TOP OF MANETOE - 2065'?
- 2070 - 2148 100% Dolomite as above, white, very coarse crystalline, recrystallized with dark grey impure zones - clear quartz and pyrite.
- CORE #2 2148' - 2152' Recovered 4'
- 2148 - 2152 Dolomite, white, very coarse crystalline, recrystallized, massive; scattered irregular patches and streaks of dark grey, very coarse crystalline dense dolomite; at 2151' these streaks occur as short discontinuous 1/8" - 1/4" parallel streaks approximately 1/2" apart, probably along bedding with indicated dip of 25° (-5° hole deviation); scattered patches and disseminations of pyrite; rare scattered fine to 3/4" vugs, occasionally with quartz intergrowths therein; a few hairline fractures at random angles; smell of gas on fresh broken surface.
- 2152 - 2200 Dolomite as above with clear and milky quartz and pyrite.
- 2200 - 2220 Dolomite as above and 25% Dolomite, medium to dark grey brown, fine to medium crystalline, granular, dense, trace quartz and pyrite, as above.
- 2220 - 2260 Dolomite, white and dark grey, very coarse crystalline as above; pyrite and quartz as above.

- 2260 - 2270 Dolomite, 50%, as above.
Dolomite, 50% medium - dark brown, microcrystalline to very fine crystalline, granular, no visible porosity, trace of disseminated pyrite.
TOP OF ARNICA 2265'
- 2270 - 2280 Dolomite as above, mistly medium brown.
- 2280 - 2290 Dolomite, becoming partly fine to medium crystalline, medium to dark grey and brown, scattered pyrite, trace intercrystalline porosity.
- 2290 - 2300 Dolomite, microcrystalline to coarse crystalline, medium to dark brown and grey mottled, few chips clear vein quartz and pyrite; trace intercrystalline porosity in micro- to coarse crystalline Dolomite.
- 2300 - 2310 Dolomite, microcrystalline to fine crystalline, medium to dark brown, and grey mottled, trace quartz crystal inclusions and rare coarse crystalline white dolomite inclusions, granular, no visible porosity; trace of fossil debris, inclusions of crinoids.
- 2310 - 2320 Dolomite mostly microcrystalline, medium to dark brown and grey, tight, trace of fine disseminated pyrite.
- 2320 - 2330 Dolomite becoming microcrystalline to very fine crystalline, granular, trace of quartz crystals indicate vuggy porosity.
- 2330 - 2340 Dolomite, fine crystalline, medium grey brown, granular, tight, 2-3% clear glassy quartz, trace intercrystalline porosity.
- 2340 - 2350 Dolomite, very fine to fine grained becoming more impure, very dark brown and grey, trace intercrystalline porosity.
- 2350 - 2360 Dolomite as above, becoming lighter brown.
- 2360 - 2380 Dolomite mostly fine to medium crystalline, medium brown, granular, trace porosity, trace white dolomite veining.
- 2380 - 2390 Dolomite as above, very fine to fine crystalline, no visible porosity; Shale (50%) very dark grey, fissile, much Shale does not appear to be caving.
- 2390 - 2400 Dolomite, medium brown, micro-to very fine crystalline, white microcrystalline patches, granular, no visible porosity, minor Shale as above.
- 2400 - 2420 80% Shale as above; 20% Dolomite.
- 2420 - 2440 60% Dolomite, few crinoid fragments, no visible porosity; 40% Shale, trace pyrite and dolomite veining.

- 2440 - 2450 Dolomite, micro- to fine crystalline, partly microcrystalline, granular, medium - dark grey and brown, ghost fossil fragments, trace pyrite, scattered very poor intercrystalline porosity mottled with white coarser patches, minor shale.
- 2450 - 2460 Shale, 60%, very dark grey with abundant slickensides; Dolomite as above, microcrystalline to very fine crystalline, trace pin-point porosity, minor white calcite veining.
- 2460 - 2470 Dolomite, very dark grey, very fine to fine crystalline, trace fossil fragment ghosts, trace pyrite inclusions, trace intercrystalline porosity, trace black bitumen - earthy, white microcrystalline patches, slightly friable.
- 2470 - 2480 Dolomite, medium dark grey-brown, microcrystalline, dense and tight.
- 2480 - 2490 Dolomite as above, trace crinoid fragments, trace quartz euhedra - possible vuggy porosity, some very fine disseminated pyrite.
- 2490 - 2500 Dolomite as above, becoming partly very dark grey, trace crinoid and ghost fossil fragments, trace calcite and dolomite veining.
- 2500 - 2510 Dolomite as above, mostly medium dark brown, trace pyrite, trace crinoid and ghost fossil fragments?, no visible porosity.
- 2510 - 2520 Dolomite, brown, and microcrystalline to very fine crystalline, trace dolomite veining and pyrite, no visible porosity, slight fragmental ghosts.
- 2520 - 2540 Dolomite as above, trace pellets, disseminated pyrite, slight veining.
- 2540 - 2550 Dolomite, medium dark brown, very fine crystalline, granular trace crinoid ghosts, no visible porosity.
- 2550 - 2560 Dolomite as above, partly microcrystalline, trace crinoids 2560' 2570'.
- 2560 - 2570 Dolomite as above, trace crinoids, possible vugs, trace pyrite and coarse crystalline dolomite.
- 2570 - 2580 Dolomite as above, very fine crystalline to coarse crystalline dolomite vug lining, trace pyrite patches.
- 2580 - 2610 Dolomite as above, partly fine crystalline, sugary scattered micro-vuggy porosity and microcrystalline porosity.
- 2610 - 2620 Dolomite, medium brown to dark brown and grey, very fine crystalline, sugary; scattered very poor intercrystalline porosity, clear and white dolomite veining, trace disseminated pyrite.
- 2620 - 2640 Dolomite, medium to dark brown and grey, microcrystalline to very

fine crystalline, trace crinoids, coarser white dolomite patches and veining, no visible porosity.

- 2640 - 2660 Dolomite, predominantly microcrystalline, medium brown, partly very fine crystalline, no visible porosity.
- 2660 - 2670 Dolomite, micro- to very fine crystalline, medium to dark grey and brown, mottled, ghost crinoids, dolomite veining, no visible porosity.
- 2670 - 2680 Dolomite, very fine crystalline, medium to dark brown, mottled, trace intercrystalline porosity, white dolomite veining.
- 2680 - 2690 Dolomite as above, no visible porosity.
- 2690 - 2700 Dolomite as above, with 30% white and partly clear crystalline calcite veining and trace quartz; Dolomite is microcrystalline to very fine crystalline.
- 2700 - 2730 Dolomite as above, 50% calcite veining as above and trace quartz, trace pyrite in calcite.
- 2730 - 2760 Dolomite as above, 20% calcite veining as above, trace pyrite.
- 2760 - 2770 Dolomite, medium to very dark grey mottled, microcrystalline to very fine crystalline, granular, trace disseminated pyrite, no visible porosity, minor calcite veining.
- 2770 - 2780 Dolomite as above, trace pyrite, 20% calcite veining.
- 2780 - 2790 Dolomite, medium to dark brown, microcrystalline, minor cryptocrystalline and very fine crystalline, dense, no visible porosity.
- 2790 - 2820 Dolomite as above, microcrystalline to cryptocrystalline, fine disseminated pyrite, no visible porosity, minor white calcite veining.
- 2820 - 2830 Dolomite as above, with minor calcite veining, trace very fine micro-vuggy porosity, pyrite as above.
- 2830 - 2840 Dolomite as above, no pyrite, no visible porosity.
- 2840 - 2860 Dolomite as above, becoming generally medium brown, disseminated pyrite, minor calcite veining slight porosity indicated by very fine quartz euhedra lining vugs, rare very fine quartz crystals interbedded in dolomite.
- TOP OF CAMBRIAN CHERT 2863'
- 2860 - 2900 Dolomite as above, light blue to green, dark grey, milky, partly bonded with disseminated pyrite, very fine quartz vug, variably dolomitic.

T.D. 2900'

CORE LABORATORIES-CANADA LTD.
CALGARY ALBERTA

Company - PAN AMERICAN PETROLEUM CORPORATION Date Report - DECEMBER 10, 1968 Page - 1 of 2
Well - PAN AM A-1 GRAINGER J-15 File - CIP-4-2045
Field - WILDCAT, NORTHWEST TERRITORIES D. Fluid - WATER BASE MUD Analysis - M
Location - - - - - Remarks - DIAMOND CORES

SAMPLE NUMBER	DEPTH REPRESENTED FEET	FOOT. HORIZONTAL) REPR. K MAX K 900)	PERM. POROSITY		DENSITY	VISUAL EXAMINATION
			FEET	PER CENT		

CORED INTERVAL 1750' - 1770'

CORE NO. 1 1750' - 1770' (Rec. 18.0') (4 boxes)

1	1750.0-1752.4	2.4	0.29	<0.01	0.70	1.9	4.56	2.64	2.69	few ppy.
-	1752.4-1754.3	1.9	-	-	-	-	-	-	-	Dense
2	1754.3-1755.8	1.5	0.05	<0.01	0.98	1.0	1.50	2.66	2.69	1. Stylol.
3	1755.8-1758.1	2.3	<0.01	<0.01	-	1.1	2.53	2.64	2.67	1. Stylol.
4	1758.1-1760.0	1.9	<0.01	<0.01	-	1.0	1.90	2.67	2.70	Intergranular
-	1760.0-1764.9	4.9	-	-	-	-	-	-	-	Dense
5	1764.9-1766.2	1.3	2.53	0.05	<0.01	3.29	1.30	2.67	2.70	1. Stylol.
6	1766.2-1768.0	1.8	<0.01	<0.01	-	0.6	1.09	2.64	2.66	1. Stylol.
-	1768.0-1770.0	2.0	-	-	-	-	-	-	-	Lost core

1 - Intergranular F - Fracture Sty. - Stylolite ppy Pinpoint vugs

CORE LABORATORIES-CANADA LTD.
CALGARY ALBERTA

PAN AMERICAN PETROLEUM CORPORATION
PANAMA-CANTON J-15

PAGE - 2 OF 2
P114 - CAP-1-1143

Core with Permeability less than 0.10 Millidarcys

Total footage of core with less than 0.10 millidarcys permeability-----	7.5'
Weighted average porosity of core with less than 0.10 millidarcys permeability-----	0.93%
Per cent of analyzed core having less than 0.10 millidarcys permeability-----	66.96%
Weighted average horizontal permeability of core with less than 0.10 md.-----	0.01 md. (0.075)

Core with Permeability 0.10 to 0.49 Millidarcys

Total footage of core with 0.10 to 0.49 millidarcys permeability-----	2.4'
Weighted average porosity of core with 0.10 to 0.49 millidarcys permeability-----	1.90%
Per cent of analyzed core having 0.10 to 0.49 millidarcys permeability-----	21.33%
Weighted average horizontal permeability of core with 0.10 to 0.49 md.-----	0.29 md. (0.695)

Core with Permeability 0.50 to 0.99 Millidarcys

Core with Permeability 1.0 to 2.9 Millidarcys

Total footage of core with 1.0 to 2.9 millidarcys permeability-----	1.3'
Weighted average porosity of core with 1.0 to 2.9 millidarcys permeability-----	1.00%
Per cent of analyzed core having 1.0 to 2.9 millidarcys permeability-----	11.51%
Weighted average horizontal permeability of core with 1.0 to 2.9 md.-----	2.53 md. (3.789)

Core with Permeability 10 Millidarcys and greater

Cored Interval-----	1750' - 1760'
Total footage-----	20.3'
Footage analyzed-----	11.2'
Footage not analyzed-----	9.1'
Weighted average porosity of core analyzed-----	1.15%
Weighted average horizontal permeability of core analyzed-----	0.35 md. (4.06)

Notes: Figures in parentheses indicate porosity feet and permeability feet

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

Received: Nov. 4, 1968 Reported: Nov. 13, 1968

Operator: Pan American Petroleum Corporation

Elev.: K.B. Grd. " Zone/formation Cambrian

Method of Production: D.S.T. #1

OTHER PERTINENT DATA

Well Location

Field of Area

Sampled from Bottom

Sample Interval 2534 - 2535

Sampled by

Date Oct. 25, 1968

WATER ANALYSIS

Lab No.

165-8272-1

	Na	K	Ca	Mg	SO ₄	Cl	CO ₃	HCO ₃	
Mg./L	409		92	20	14	715		217	
eq./L	17.78		4.59	1.64	0.29	20.16		3.56	
eq. %	37.03		9.56	3.42	0.60	41.98		7.41	

Total Solids Mg/L: 1467

Calculated: 1467

By Evaporation: 1330

After Ignition: 985

Present Specific Gravity: 1.002

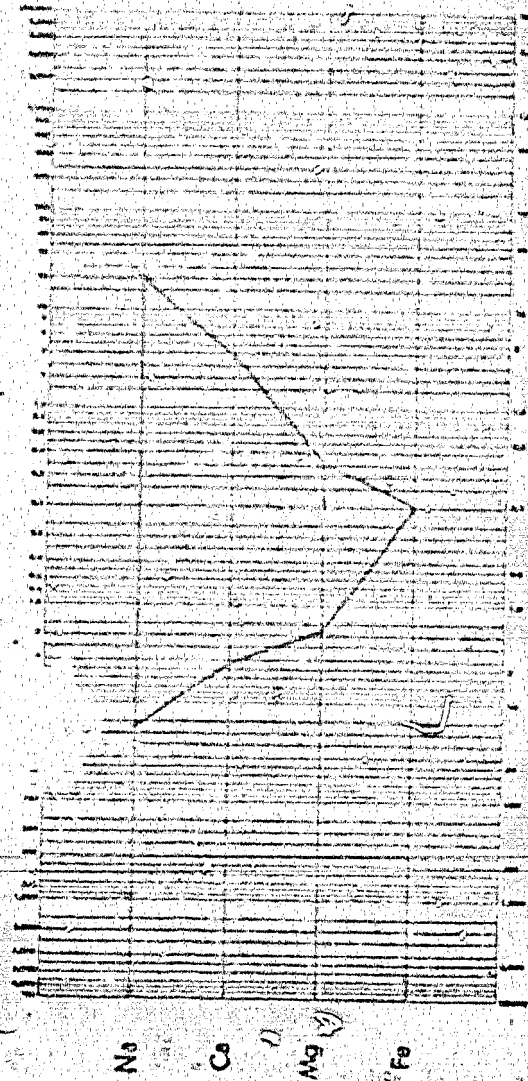
H₂S Nil

Refractive Index: 1.3314

Observed pH: 7.7

Resistivity: 3.56 ohm-cm @ 68°F

Pattern Unit: Meq/L



Remarks: Sample consisted of colourless water with some sediment. Trace of organic matter detected in total evaporated solids.

RESISTIVITY: 23.1 ohm-cm at 68°F.

Sample consisted of colourless water with some sediment present.

Sampled from middle.

RESISTIVITY: 9.09 ohm-cm at 68°F.

Sample consisted of colourless water with some sediment present.

CHEMICAL & GEOLOGICAL LABORATORIES LTD.

WATER ANALYSIS

Lab No. 268-8570-3

Received: Dec. 9, 1968 Reported: Dec. 11, 1968

Operator: Pan American Petroleum Corporation

Elev.: K.B. Grd.

Zone/Formation: Manitoe

Method of Production: D.S.T. #3

OTHER PERTINENT DATA (D. Straddle)

Well: Location: Pan Am. Grainger J-15

Field or Area: Grainger, N.W.T.

Sampled from: Bottom (Drillpipe)

Sampled by:

Sample Interval: 2144' - 1718'

Date: Oct. 27, 1968

(Signed)

Na	K	Ca	Mg	SO ₄	Cl	CO ₂	HCO ₃
45		55	16	7	74		230
1.95		2.74	1.32	0.15	2.09		3.77
16.22		22.80	10.98	1.25	17.39		31.36

Total Solids Mg/L:

By Evaporation 370

Calculated

427 After Ignition

Fe Present

Specific Gravity

1.001

@60°F

Observed pH

7.8

@ 74 °F

H₂S Nil

Refractive Index

1.3332

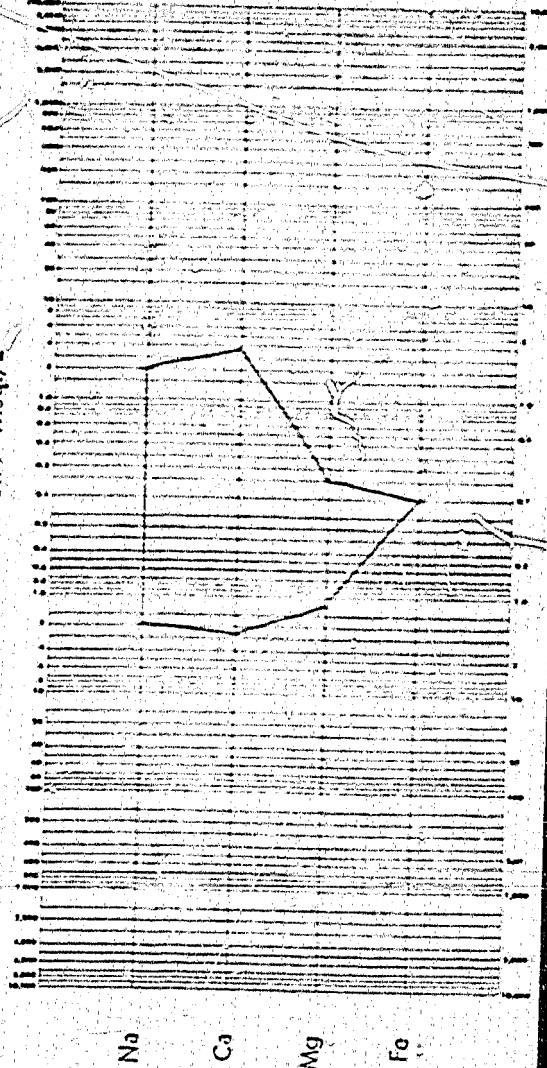
@25°C

Resistivity

15.61 ohm-meters

@ 68 °F

Pattern Unit Meq./L



Remarks and Conclusions: Sample consisted of colourless water containing a small amount of sediment. Trace organic matter in total solids.

E68-8570-1: Sampled from Top.

RESISTIVITY: 21.79 Ohm-meters at 68°F.

Sample consisted of slightly muddy water. The filtrate was colourless.

E68-8570-2: Sampled from Middle.

RESISTIVITY: 15.85 Ohm-meters at 68°F.

Sample consisted of colourless water containing a small amount of sediment. Trace organic matter in total solids.

CORE ANALYSIS REPORT
FOR

PAN AMERICAN PETROLEUM CORPORATION

PAN AM A-1 GRAINGER ~~WILDCAT~~ J 15
WILDCAT - NORTHWEST TERRITORIES

CORE LABORATORIES - Canada Ltd.

Petroleum Reservoir Engineering

CALGARY - EDMONTON - REGINA

COPE LABORATORIES-CANADA LTD.
CALGARY ALBERTA

Company - PAN AMERICAN PETROLEUM CORPORATION Date Report - DECEMBER 10, 1968 Page - 1 of 2
Well - PAN AM A-1 GRAINGER ~~3-15~~ File - CNP-4-4443
Field - WILDCAT, NORTHWEST TERRITORIES D. Fluid - WATER BASE MUD Analysts - M
Location - Analysis - FULL DIAMETER Remarks - DIAMOND CORES

SAMPLE DEPTH FOOT. PERMEABILITY TO AIR PERM. POROSITY DENSITY VISUAL
REPRESENTED HORIZONTAL)
NUMBER FEET REPR. K MAX K 90° VERTICAL FEET PER CENT FEET BULK GRAIN EXAMINATION

CORED INTERVAL 1750' - 1770'

CORE NO. 1 1750.1 - 1770.1 (Rec. 18.0') (4 boxes)

1	1750.0-1752.4	2.4	0.29	<0.01	<0.01	0.70	1.9	4.56	2.64	2.69	Few PPV.
-	1752.4-1754.3	1.9	-	-	-	-	-	-	-	-	Dense
2	1754.3-1755.8	1.5	0.05	<0.01	<0.01	0.08	1.0	1.50	2.66	2.69	1. Stylol.
3	1755.8-1758.1	2.3	<0.01	<0.01	<0.01	-	1.1	2.53	2.64	2.67	1. Stylol.
4	1758.1-1760.0	1.9	<0.01	<0.01	<0.01	-	1.0	1.90	2.67	2.70	Intergranular
-	1760.0-1764.9	4.9	-	-	-	-	-	-	-	-	Dense
5	1764.9-1766.2	1.3	2.53	0.05	<0.01	3.29	1.0	1.30	2.67	2.70	1. F.
6	1766.2-1768.0	1.8	<0.01	<0.01	<0.01	-	0.6	1.08	2.64	2.66	1. Stylol.
-	1768.0-1770.0	2.0	-	-	-	-	-	-	-	-	Test core

1 - Intergranular F - Fracture Sty. - Stylolite PPV - Pinpoint vugs

Core with Permeability less than 0.10 Millidarcys

Total footage of core with less than 0.10 millidarcys permeability-----	7.5'
Weighted average porosity of core with less than 0.10 millidarcys permeability-----	0.93% (7.0%)
Per cent of analyzed core having less than 0.10 millidarcys permeability-----	66.96%
Weighted average horizontal permeability of core with less than 0.10 md.-----	0.01 md. (0.075)

Core with Permeability 0.10 to 0.49 Millidarcys

Total footage of core with 0.10 to 0.49 millidarcys permeability-----	2.4'
Weighted average porosity of core with 0.10 to 0.49 millidarcys permeability-----	1.90% (4.56)
Per cent of analyzed core having 0.10 to 0.49 millidarcys permeability-----	21.43%
Weighted average horizontal permeability of core with 0.10 to 0.49 md.-----	0.29 md. (0.696)

Core with Permeability 0.50 to 0.99 Millidarcys - Nil

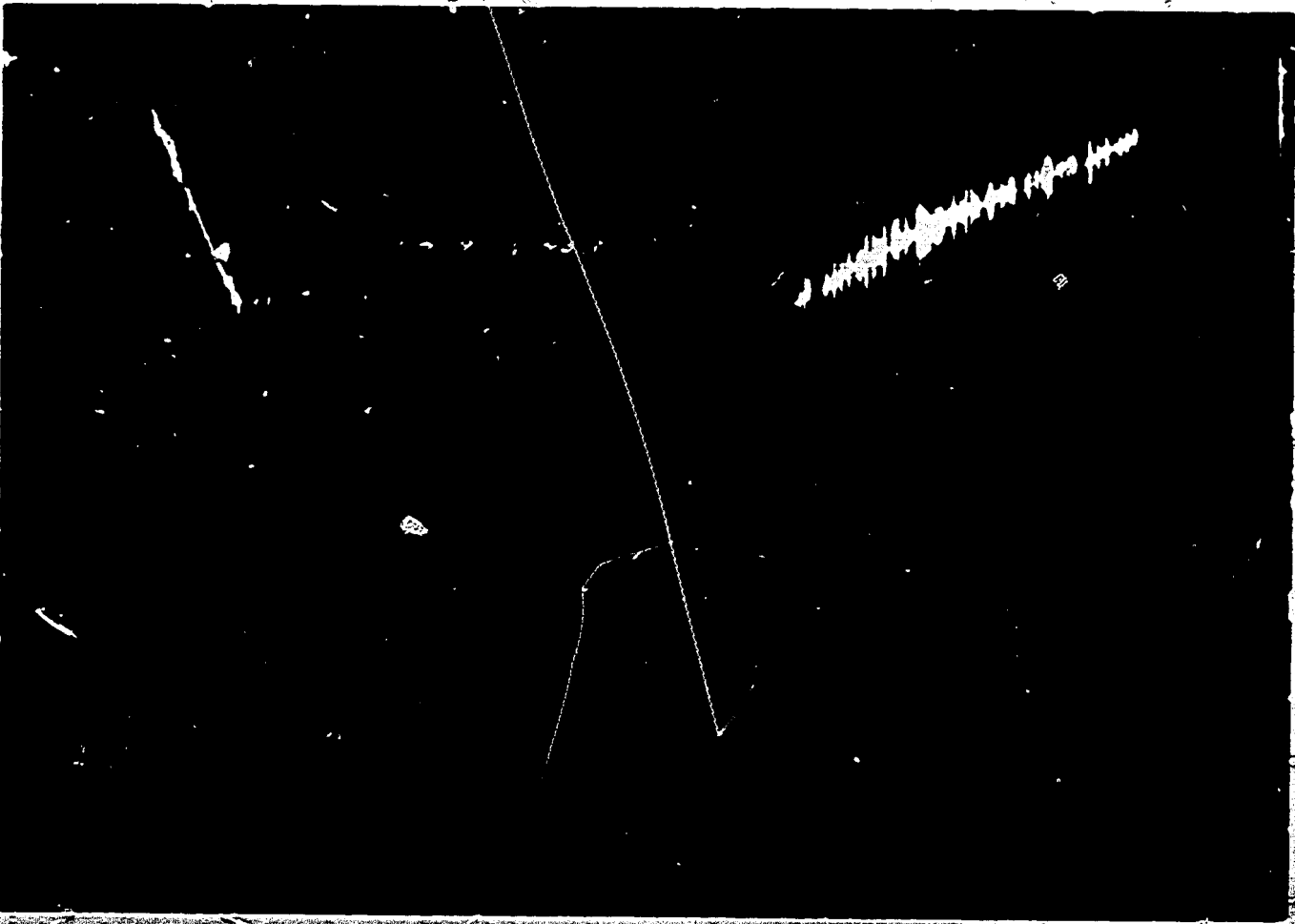
Core with Permeability 1.0 to 9.9 Millidarcys

Total footage of core with 1.0 to 9.9 millidarcys permeability-----	1.3'
Weighted average porosity of core with 1.0 to 9.9 millidarcys permeability-----	1.00% (1.30)
Per cent of analyzed core having 1.0 to 9.9 millidarcys permeability-----	11.61%
Weighted average horizontal permeability of core with 1.0 to 9.9 md.-----	2.53 md. (3.289)

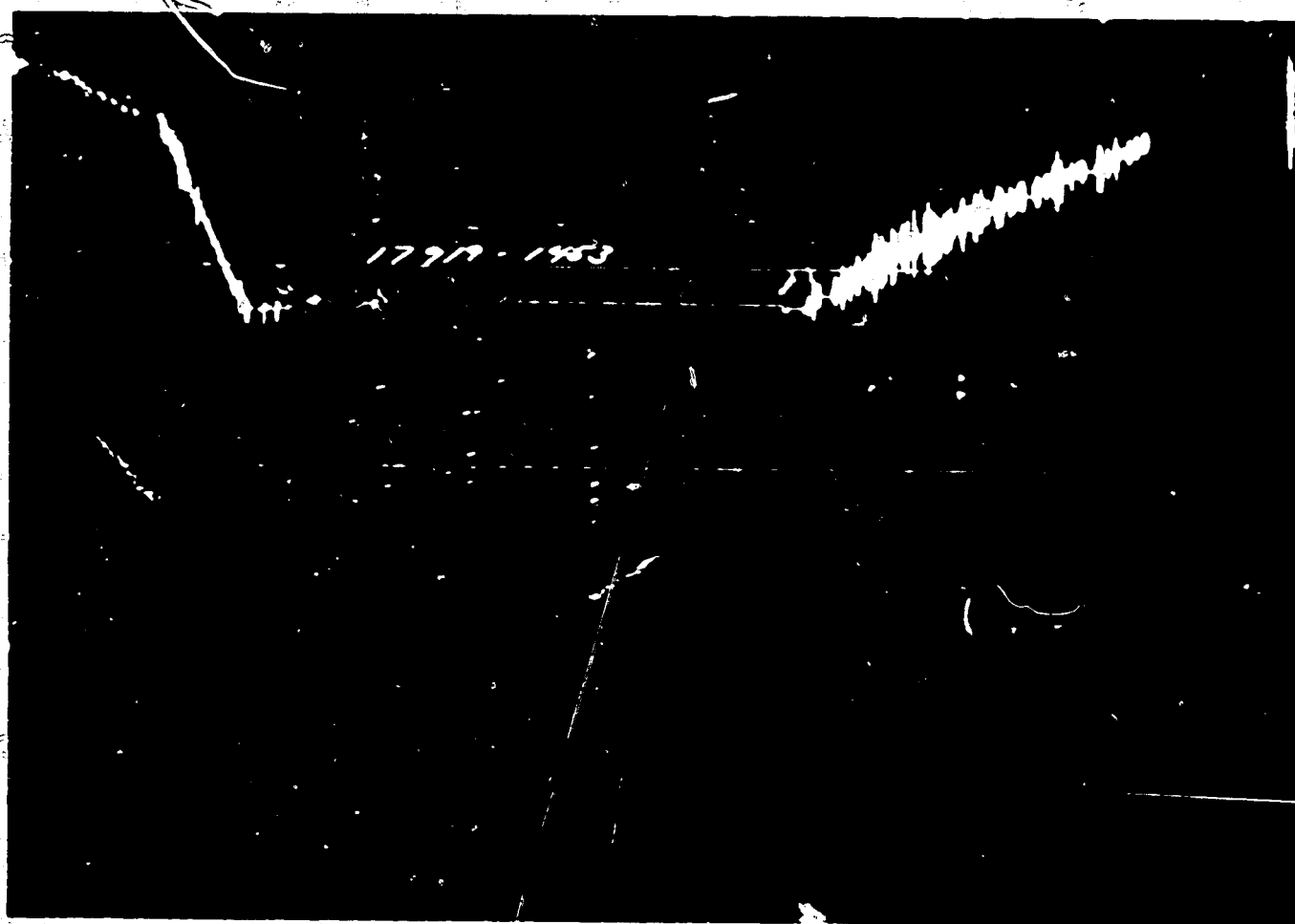
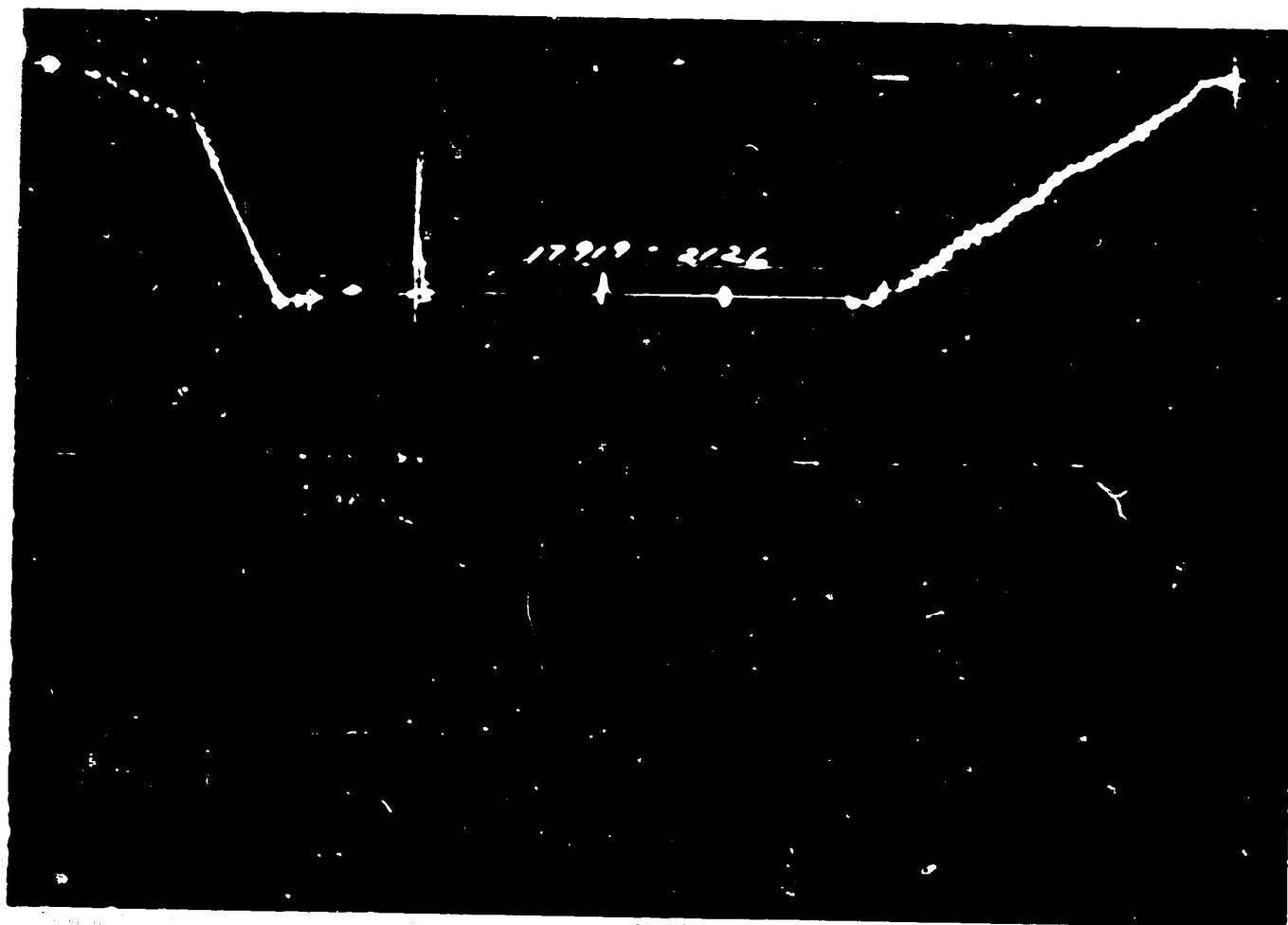
Core with Permeability 10 Millidarcys and Greater - Nil

Cored Interval-----	1750' - 1770'
Total footage-----	20.0'
Footage Analyzed-----	11.2'
Footage not analyzed----- dense 6.8'; lost core 2.0'	8.8'
Weighted average porosity of core analyzed-----	1.15% (12.87)
Weighted average horizontal permeability of core analyzed-----	0.36 md. (4.36)

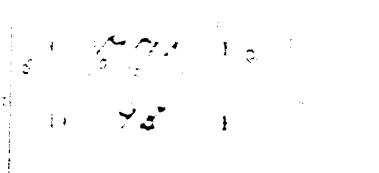
Note: Figures in parentheses indicate porosity feet and permeability feet



Each Horizontal Line Equal to 1000 p.s.i.



Each Horizontal Line Equal to 1000 p.s.i.



TEMPERATURE RECORD

Each concentric line
equals 10°F.

Temperature increases
outwardly

Vacuet No T. 17222

Temperature Range °F

75 °F to 79 °F

A to B — Initial CIP

B to C — 2nd Flow

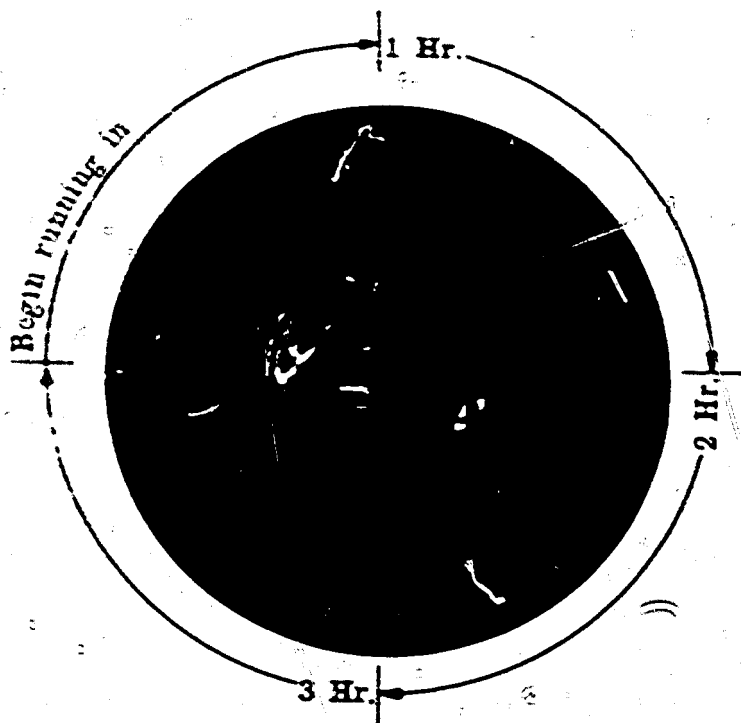
C to D — Final CIP

A °F

B °F

C MAX °F

D 79 °F



HOWCO 521020

LOCAL DISPOSITION 64° 20' N. 123 - 01 W.

FIELD OR AREA

GRANGER

PROVINCE NORTH WEST TERRITORIES

Depth Top Gauge	2818	Pt.	Blanked Off	No	Date	October 25, 1964	Ticket No.	T17019
BT P.R.D. No.	2126		12	Hr. Clock	Kind of Job	Bottom Hole	HOWCO District	Ft. St. John
Pressure Readings	Field		Office Corrected		Tester	D. Irving	Witness	D. Jenkins
Initial Hydro Mud Pressure	1213		1215		Contractor	Brinkerhoff Bros. Ltd.		
Initial Closed in Pressure	1199		1169		K & B Flowgram	873	Top Packer Depth	2831
Initial Flow Pressure	1136		1078		Total Depth	2900	Casing Perforations	Top Bottom
Final Flow Pressure	1207		1169		Interval Tested	2834-2900	Formation Tested	Cambrian
Final Closed in Pressure	1207		1169		Casing or Hole Size	6 3/4	Linear or Rathole Size	
Final Hydro Mud Pressure	1221		1187		Size Surface Choke	1"	Size Bottom Choke	5/8"
Depth Centre Gauge		Pt.	Blanked Off		Size Drill Pipe	3 1/2 J.F.	ID and Length Drill Collars	1 1/2" x 500'
BT P.R.D. No.				Hr. Clock	Anchor I.D.	3	Amount Type of Cushion	
Pressure Readings	Field		Office Corrected		Gauge Depth Temp.	98	°F. max. Mud Weight	8.3
Initial Hydro Mud Pressure					All Depths Measured From	K.B.	Mud Viscosity	28
Initial Closed in Pressure					Time Periods (Minutes)		No. Folders Reproduced	5
Initial Flow Pressure					1st Flow	5	Initial CIP	90
Final Flow Pressure					2nd Flow	60	Final CIP	60
Final Closed in Pressure					Recovered	2750	Foot of Slightly gas cut water.	
Final Hydro Mud Pressure					Recovered		Foot of	
					Recovered		Foot of	
					Recovered		Foot of	
Depth Bottom Gauge	2978	Pt.	Blanked Off	Yes	Oil Recovery Degrees: API		Water Recovery Specific Gravity	
BT P.R.D. No.	1453		12	Hr. Clock	REMARKS:	Open tool with strong air blow at		
Pressure Readings	Field		Office Corrected			8.55 A.M. Tool closed at 9.00 A.M. Tool		
Initial Hydro Mud Pressure	1209		1244			open at 10.30 A.M. with strong air blow.		
Initial Closed in Pressure	1203		1195			Dead in 10 minutes. Shut in tool at 11.30		
Initial Flow Pressure	1192		1187			A.M. Pulled loose at 12.30 P.M. Lost mud		
Final Flow Pressure	1203		1195			before opening tool, and we were losing mud		
Final Closed in Pressure	1203		1195			slowly throughout test.		
Final Hydro Mud Pressure	1220		1213					

BT No. 2126 Depth 2818

12 Hr. Clock No. ?

Temperature Corrected to

98 °F

1st Flow Pressure		Initial CIP						2nd Flow Pressure		Final CIP					
Time Diff. 000" T-P10	PSIG Temp. Corr.	Time Diff. 000" 0	T+0	T-0 0	PSIG Temp. Corr.	PSIG +10° (Sat.)		Time Diff. 000" T-P10	PSIG Temp. Corr.	Time Diff. 000" 0	T+0	T-0 0	PSIG Temp. Corr.	PSIG +10° (Sat.)	
P0	.000	888	.000			1042		.000	1078	.000			1169		
P1	.013	950	.062			1169		.041	1169	.044			1169		
P2	.026	1042	.124			1169		.082	1169	.088			1169		
P3			.186			1169		.123	1169	.132			1169		
P4			.248			1169		.164	1169	.176			1169		
P5			.310			1169		.205	1169	.220			1169		
P6			.372			1169		.246	1169	.264			1169		
P7			.434			1169		.287	1169	.308			1169		
P8			.496			1169		.328	1169	.352			1169		
P9			.558			1169		.369	1169	.396			1169		
P10			.620			1169		.410	1169	.440			1169		

BT No. 1453 Depth 2978

12 Hr. Clock No. ?

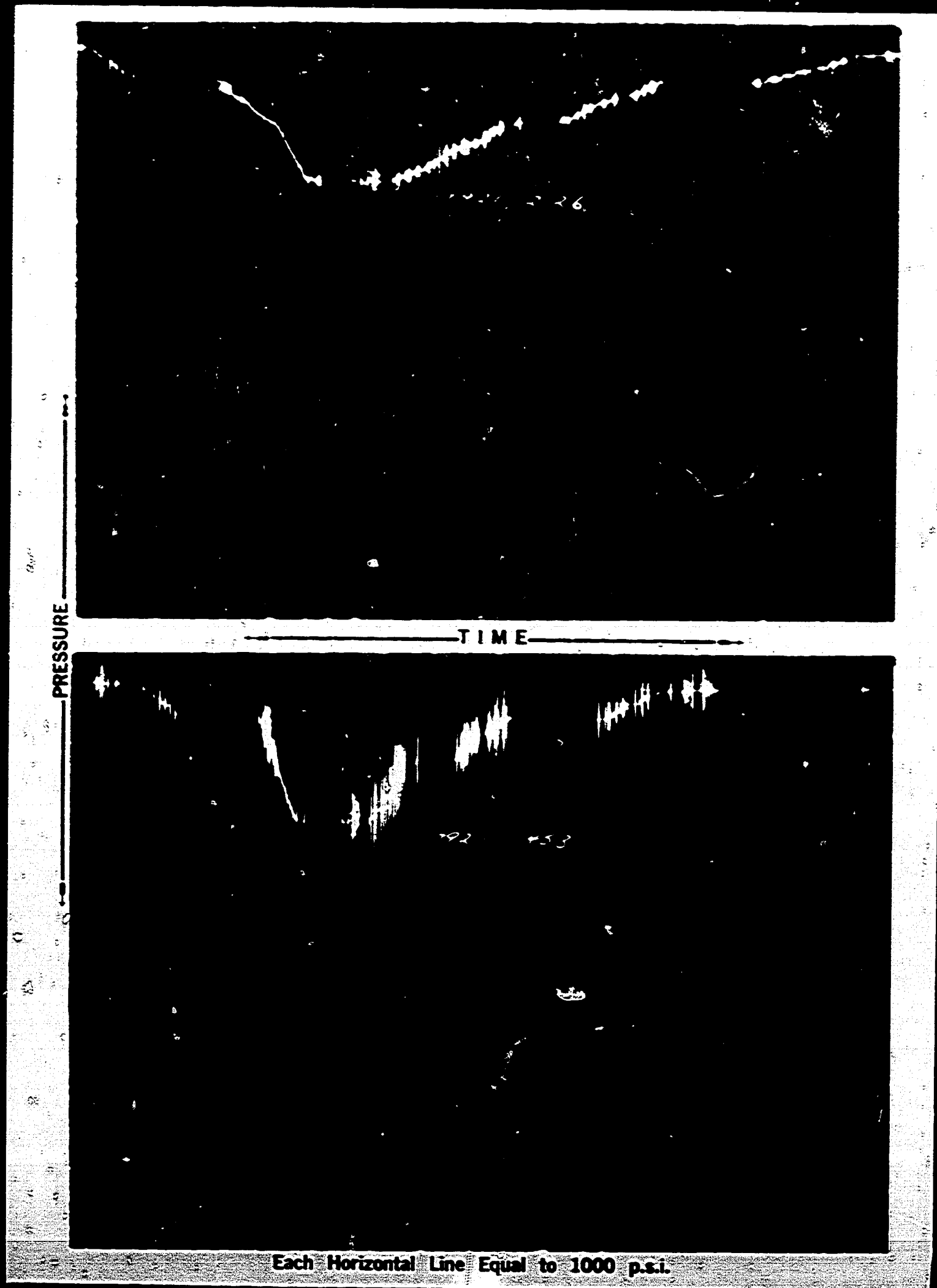
Temperature Corrected to

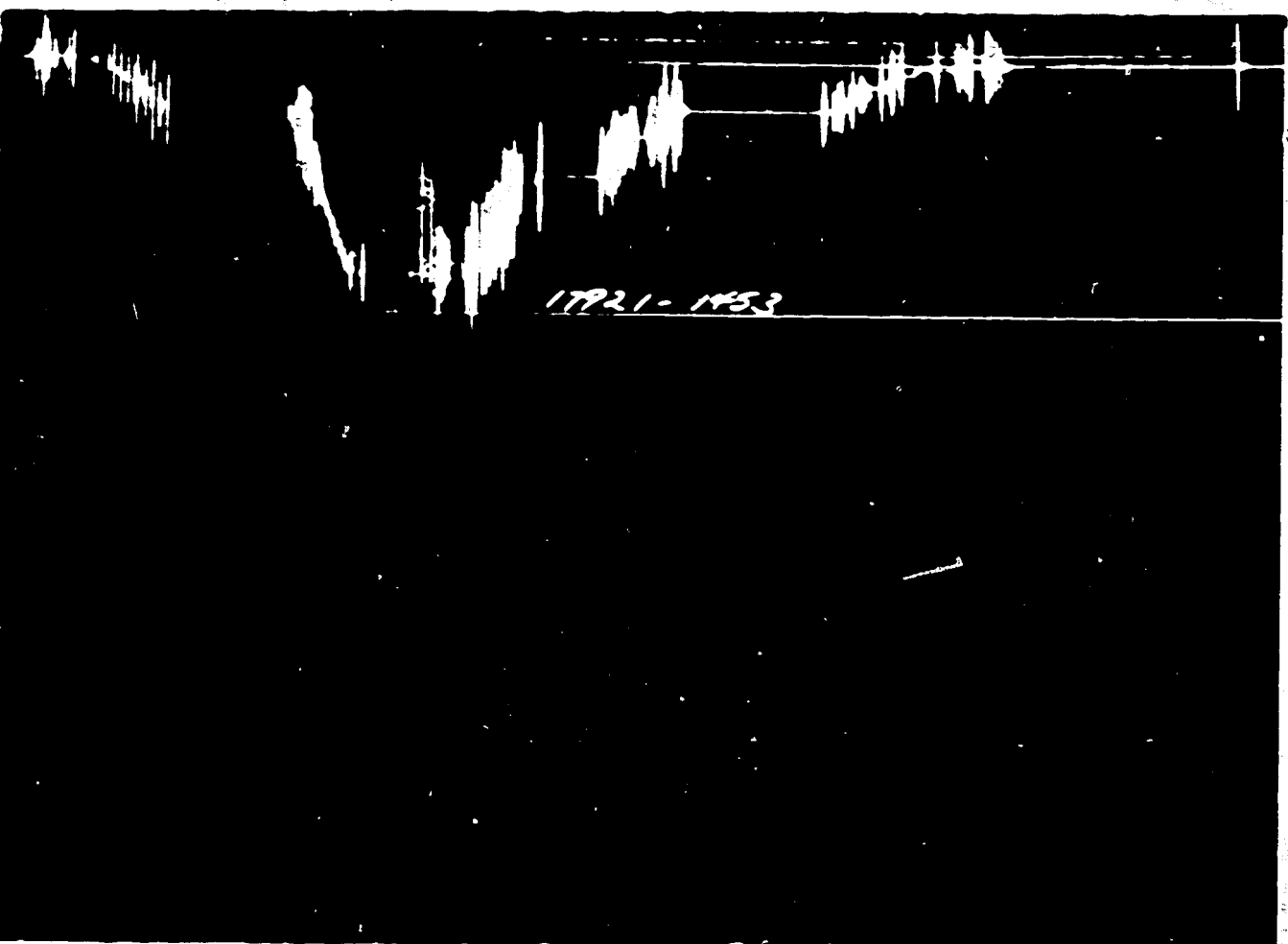
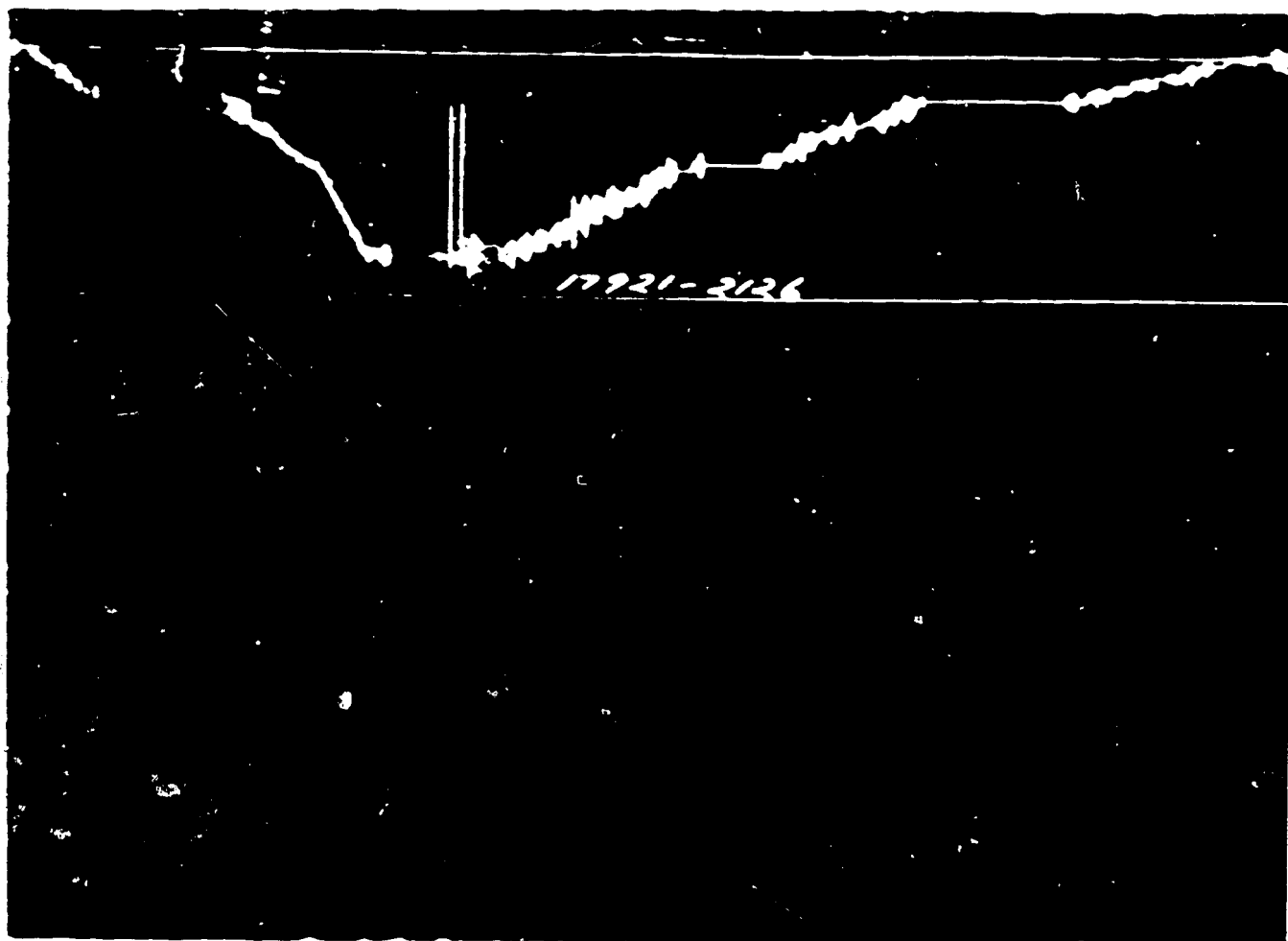
98 °F

1st Flow Pressure		Initial CIP						2nd Flow Pressure		Final CIP					
Time Diff. 000" T-P10	PSIG Temp. Corr.	Time Diff. 000" 0	T+0	T-0 0	PSIG Temp. Corr.	PSIG +10° (Sat.)		Time Diff. 000" T-P10	PSIG Temp. Corr.	Time Diff. 000" 0	T+0	T-0 0	PSIG Temp. Corr.	PSIG +10° (Sat.)	
P0	.000	1158	.000			1186		.000	1187				1195		
P1	.012	1172	.060			1195		.039	1195				1195		
P2	.024	1196	.120			1195		.078	1195				1195		
P3			.180			1195		.117	1195				1195		
P4			.240			1195		.156	1195				1195		
P5			.300			1195		.195	1195				1195		
P6			.360			1195		.234	1195				1195		
P7			.420			1195		.273	1195				1195		
P8			.480			1195		.312	1195				1195		
P9			.540			1195		.351	1195				1195		
P10			.600			1195		.390	1195	.400			1195		

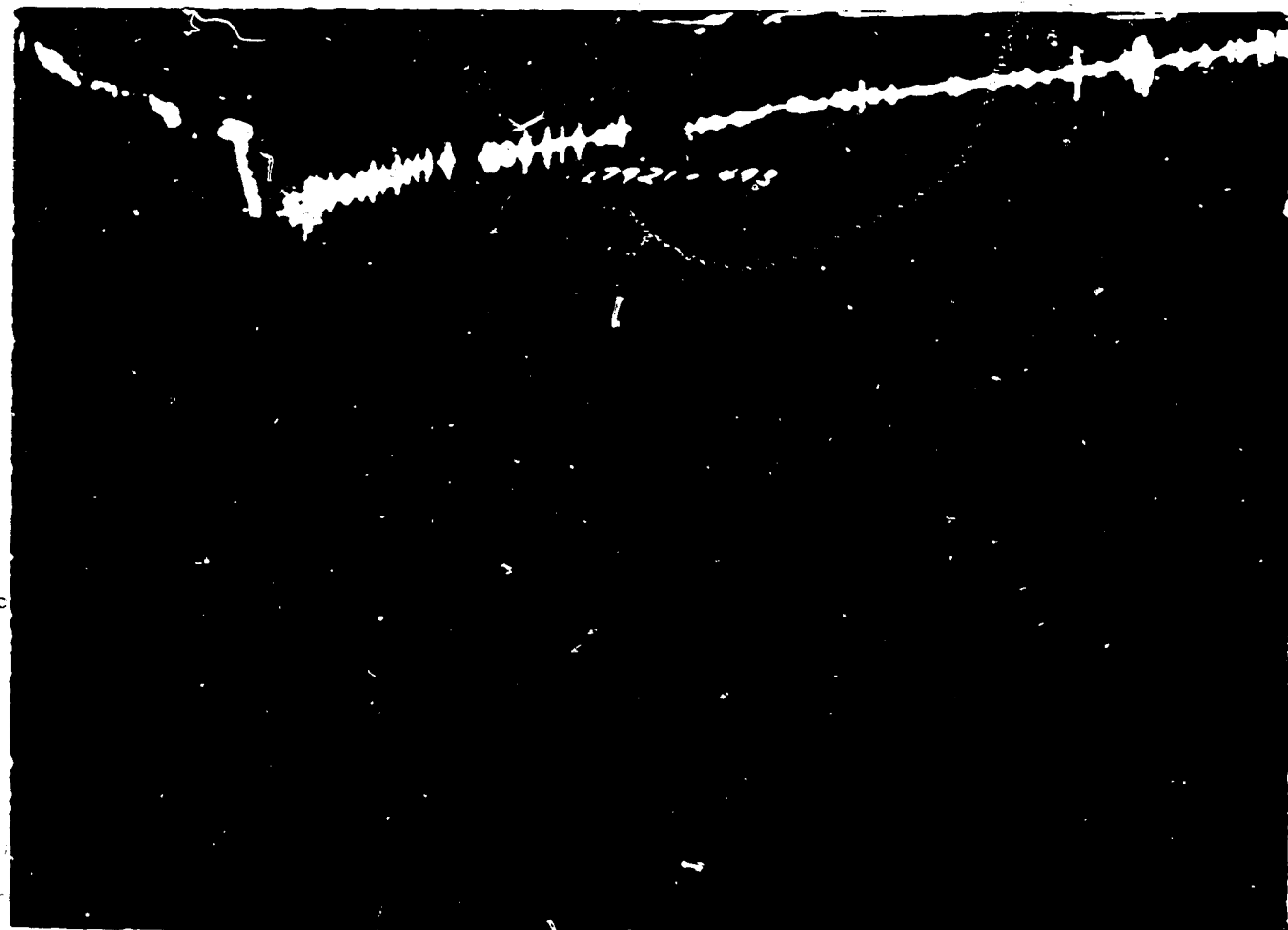
Intervals of Pressure Readings (Minutes): 1st Flow Pressure 2.5 Initial CIP 9.0 2nd Flow Pressure 6.0 Final CIP 6.0

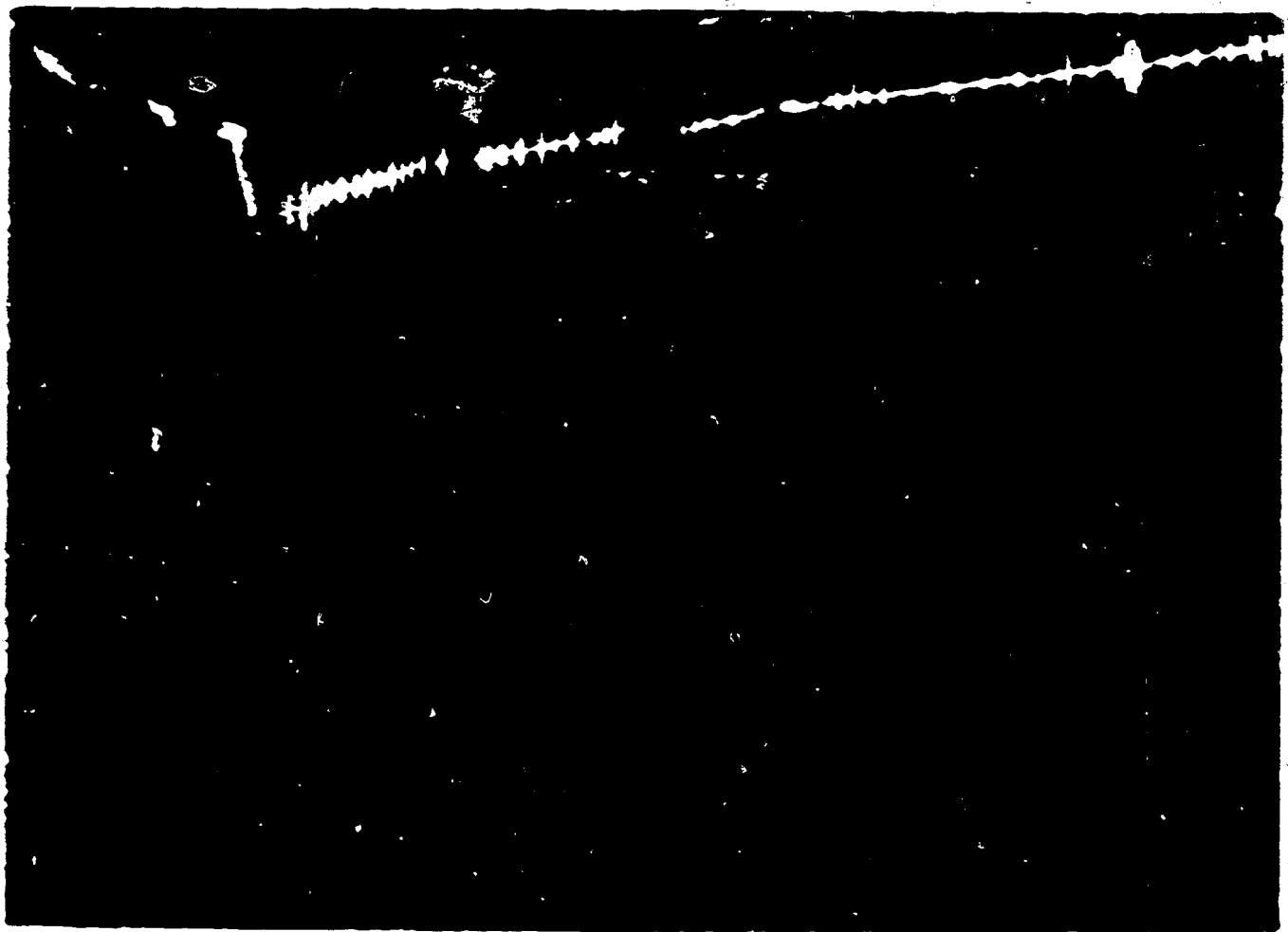
Remarks:





Each Horizontal Line Equal to 1000 p.s.i.





Log Name

Well No.

Tool No.

Casing Depth

Log On

LICAL DESCRIPTION 6' 20' N. 123.0' W.

FIELD OR AREA

CRANINGER

PROVINCE

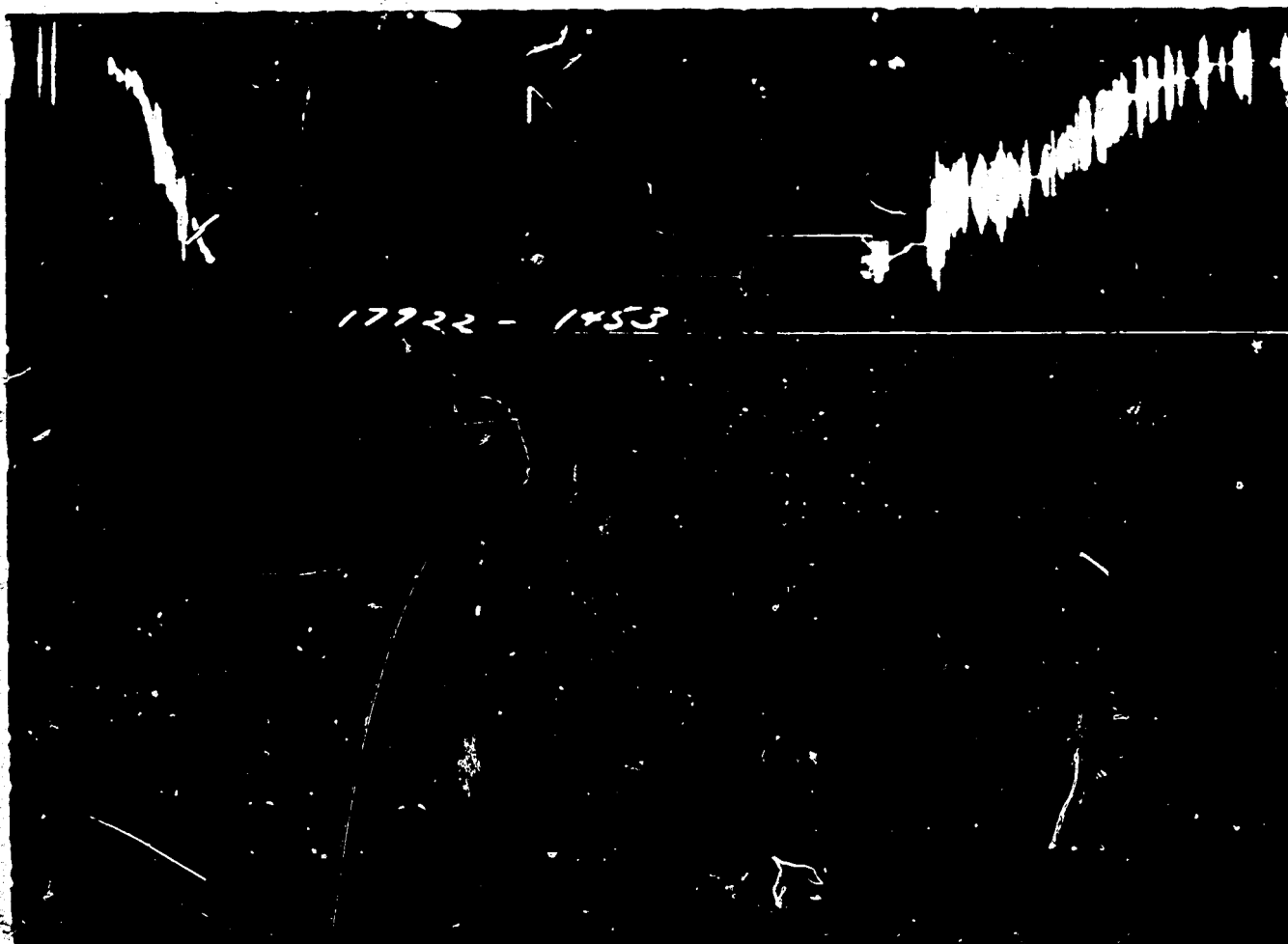
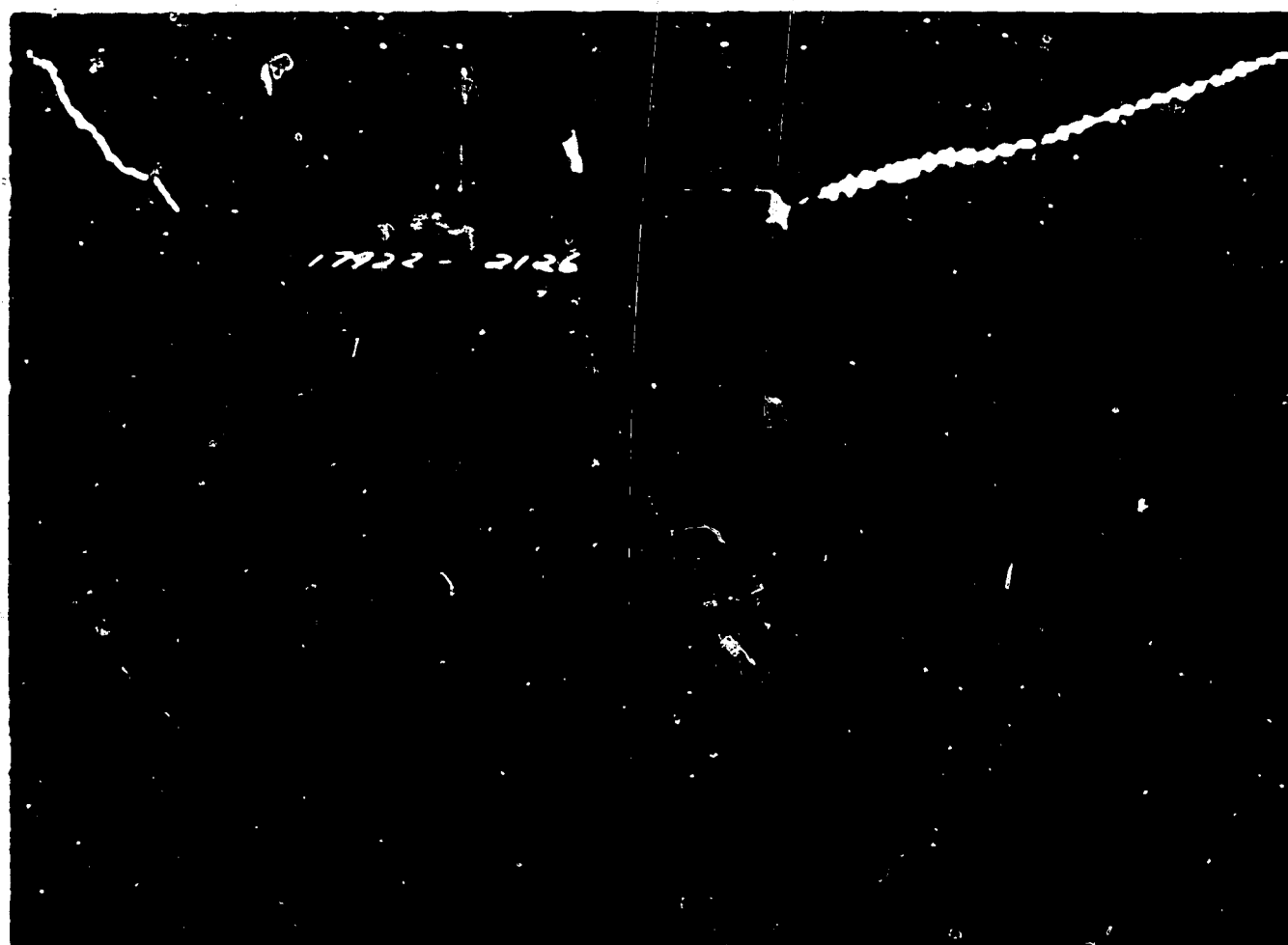
NORTH WEST TERRITORIES

Depth Top Gauge	2114 Ft.	Blanked Off	No	Date	October 27, 1967	Tool No.	TI-7921
BT P.R.D. No.	2126	12 Hr. Clock		Kind of Job	Drill Straddle	HOWCO District	Ft. St. John
Pressure Readings	Field	Office Corrected		Tester	D. Irving	Witness	D. Jenkins
Initial Hydro Mud Pressure		857		Contractor	Brinkerhoff Drilling Co. Ltd.		
Initial Closed in Pressure				K.B. Elevation	574	Top Packer Depth	1955 Bottom Packer Depth 2130
Initial Flow Pressure				Total Depth	2130	Casing Perforations	Top Bottom
Final Flow Pressure				Formation Tested	1955-2130		
Final Closed in Pressure				Casing or Hole Size	6 3/4	Liner or Rathole Size	
Final Hydro Mud Pressure		857		Size Surface Choke	1"	Size Bottom Choke	5/8 Size and Type Well Packer 5 1/2 ES
Depth Centre Gauge	2146 Ft.	Blanked Off	Yes	Size Drill Pipe	3 1/2 I.F.	ID and Length Drill Collars	1 1/2 x 500'
BT P.R.D. No.	2153	12 Hr. Clock		Anchor I.D.	5	Amount-Type of Cushion	
Pressure Readings	Field	Office Corrected		Gauge Depth Temp.		"F. max. Mud "F. ext. Weight	823 Mud Viscosity 28
Initial Hydro Mud Pressure		863		All Depths Measured From	K.B.	No. Folders Reproduced	5
Initial Closed in Pressure				Time Periods (Minutes)			
Initial Flow Pressure				1st Flow	Initial CIP	2nd Flow	Final CIP
Final Flow Pressure				Recovered	Foot of		
Final Closed in Pressure				Recovered	Foot of		
Final Hydro Mud Pressure		865		Recovered	Foot of		
Depth Bottom Gauge	2886 Ft.	Blanked Off	Yes	Oil Recovery Degrees API		Water Recovery Specific Gravity	
BT P.R.D. No.	493	24 Hr. Clock		REMARKS:	Misrun. No packer seat.		
Pressure Readings	Field	Office Corrected					
Initial Hydro Mud Pressure		1257					
Initial Closed in Pressure							
Initial Flow Pressure	Below	Straddle					
Final Flow Pressure							
Final Closed in Pressure							
Final Hydro Mud Pressure		1257					

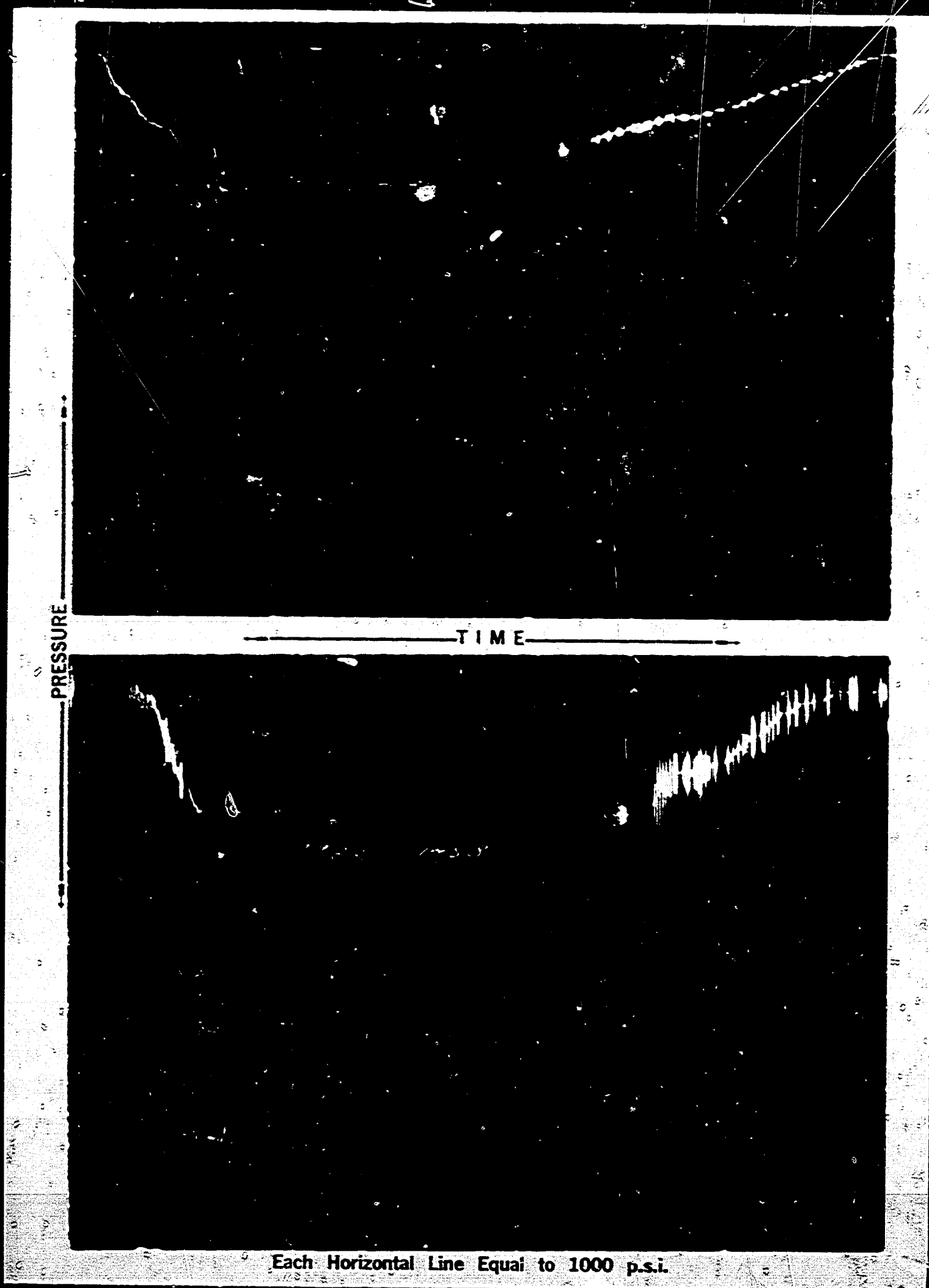


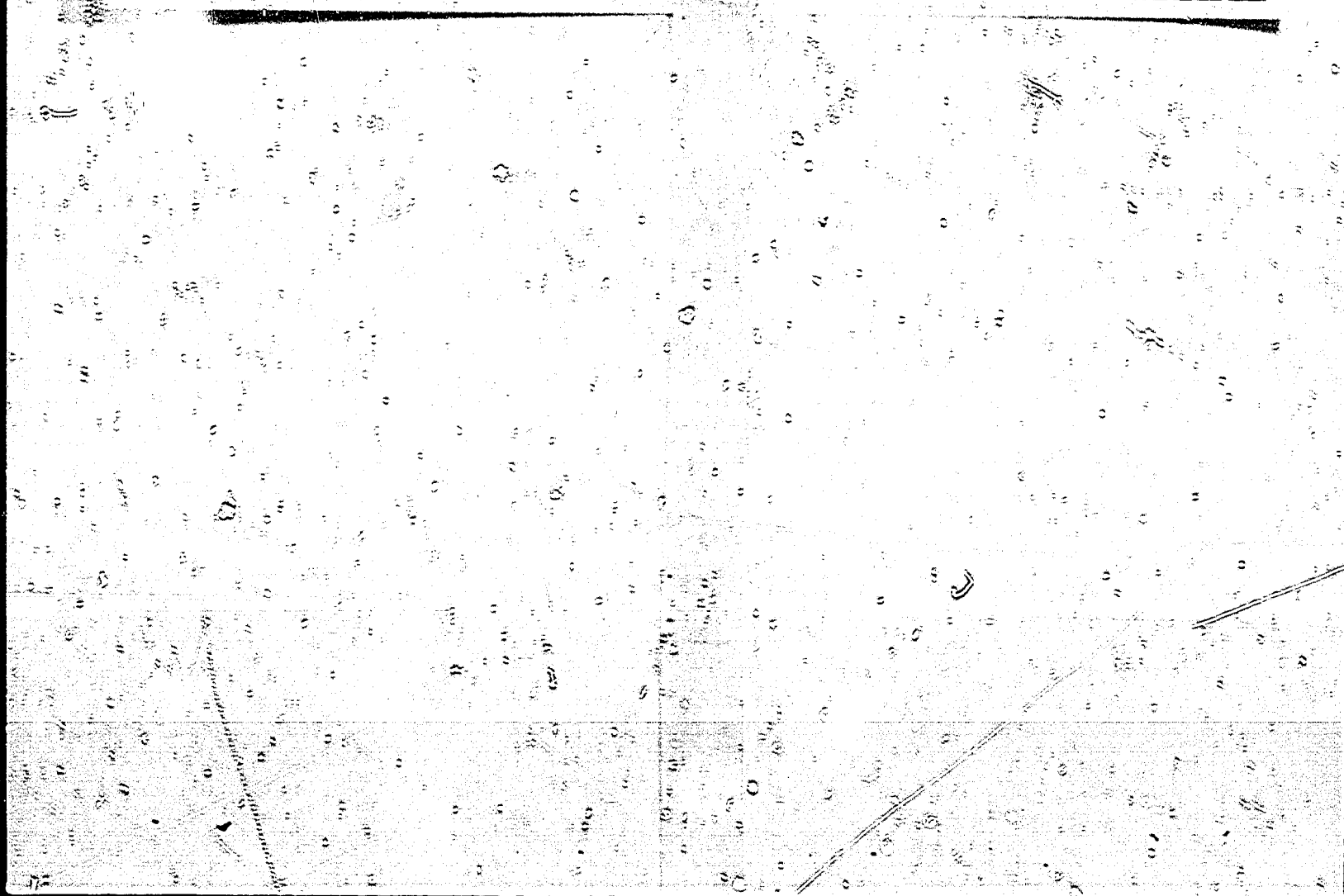
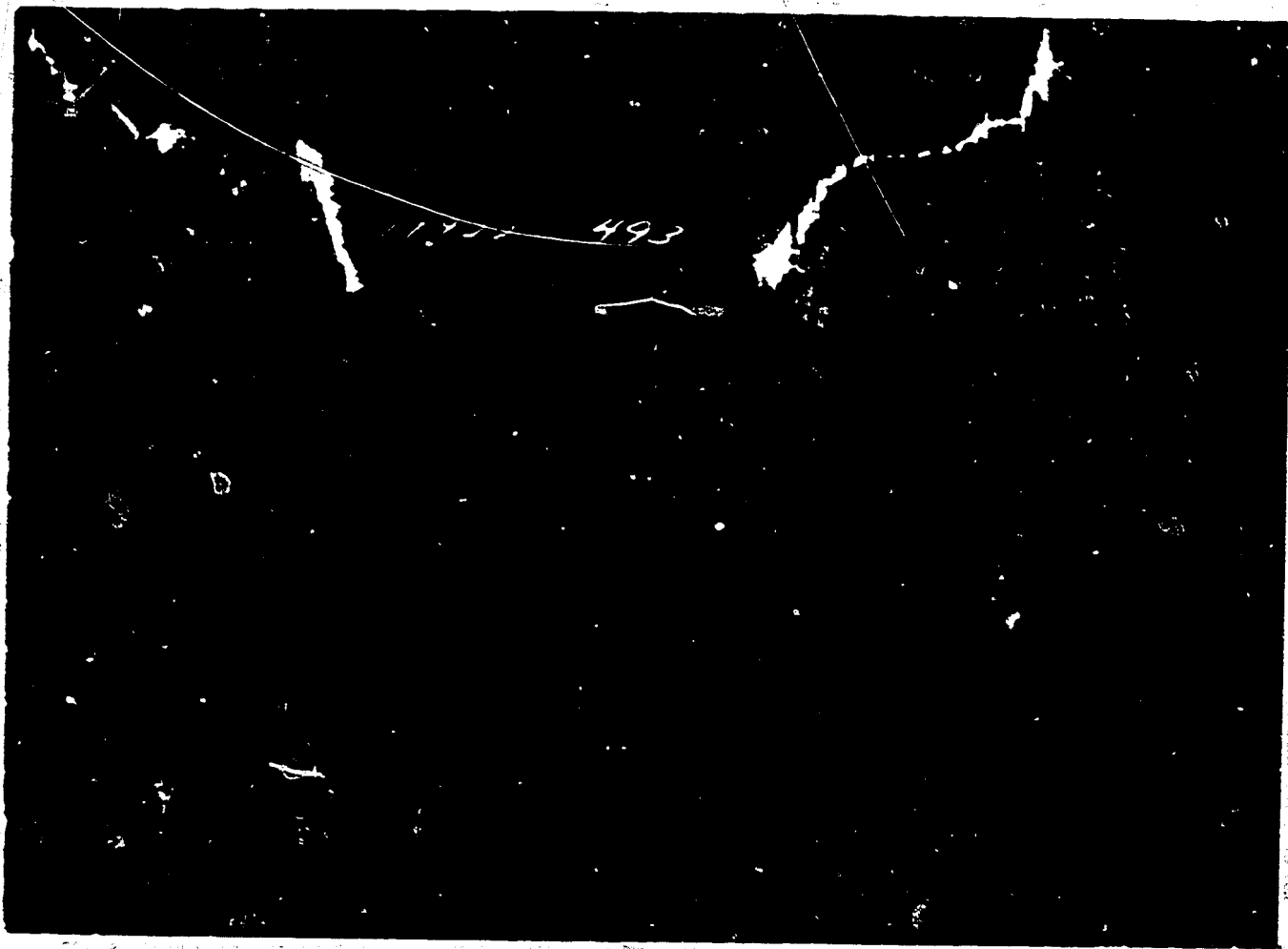
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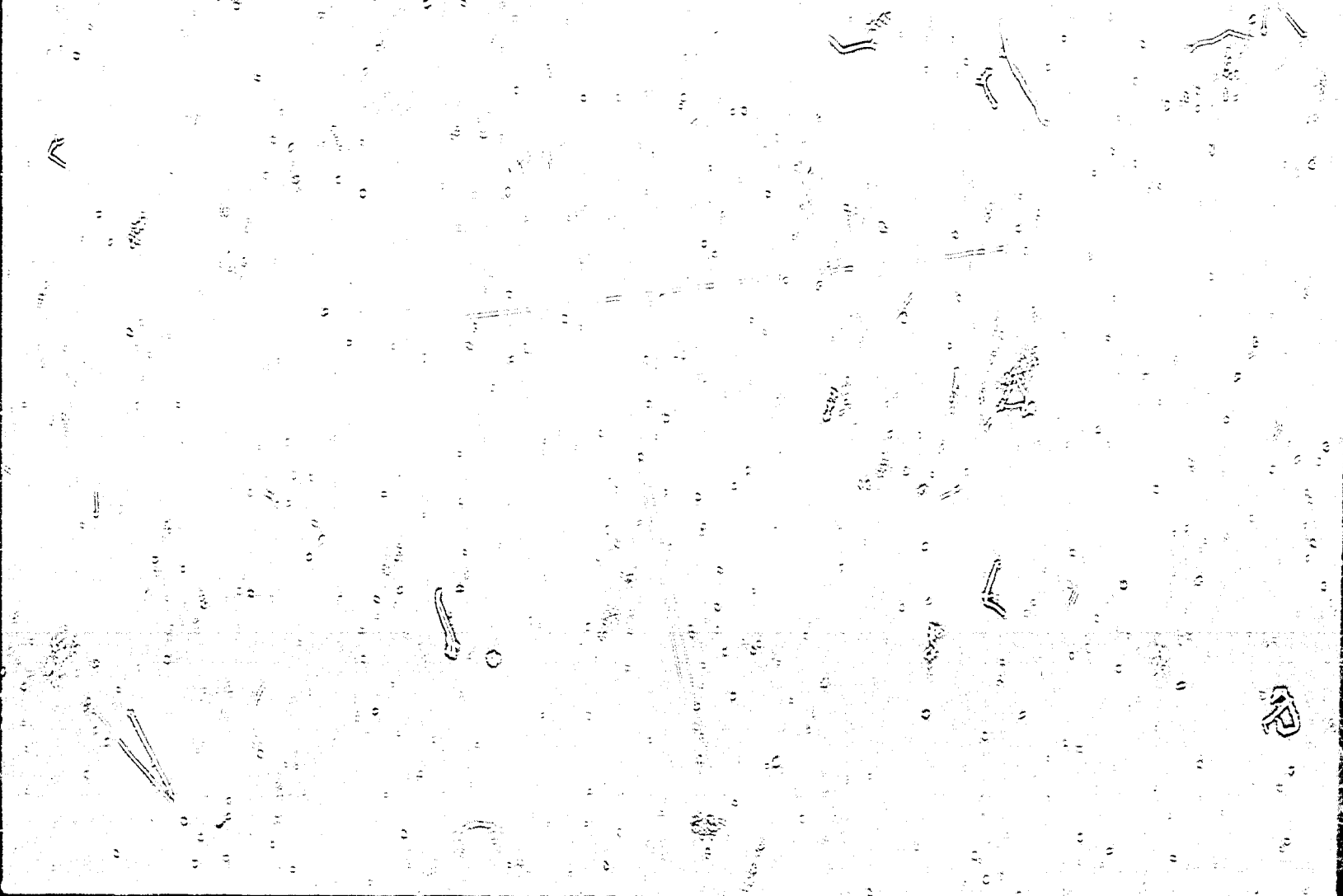
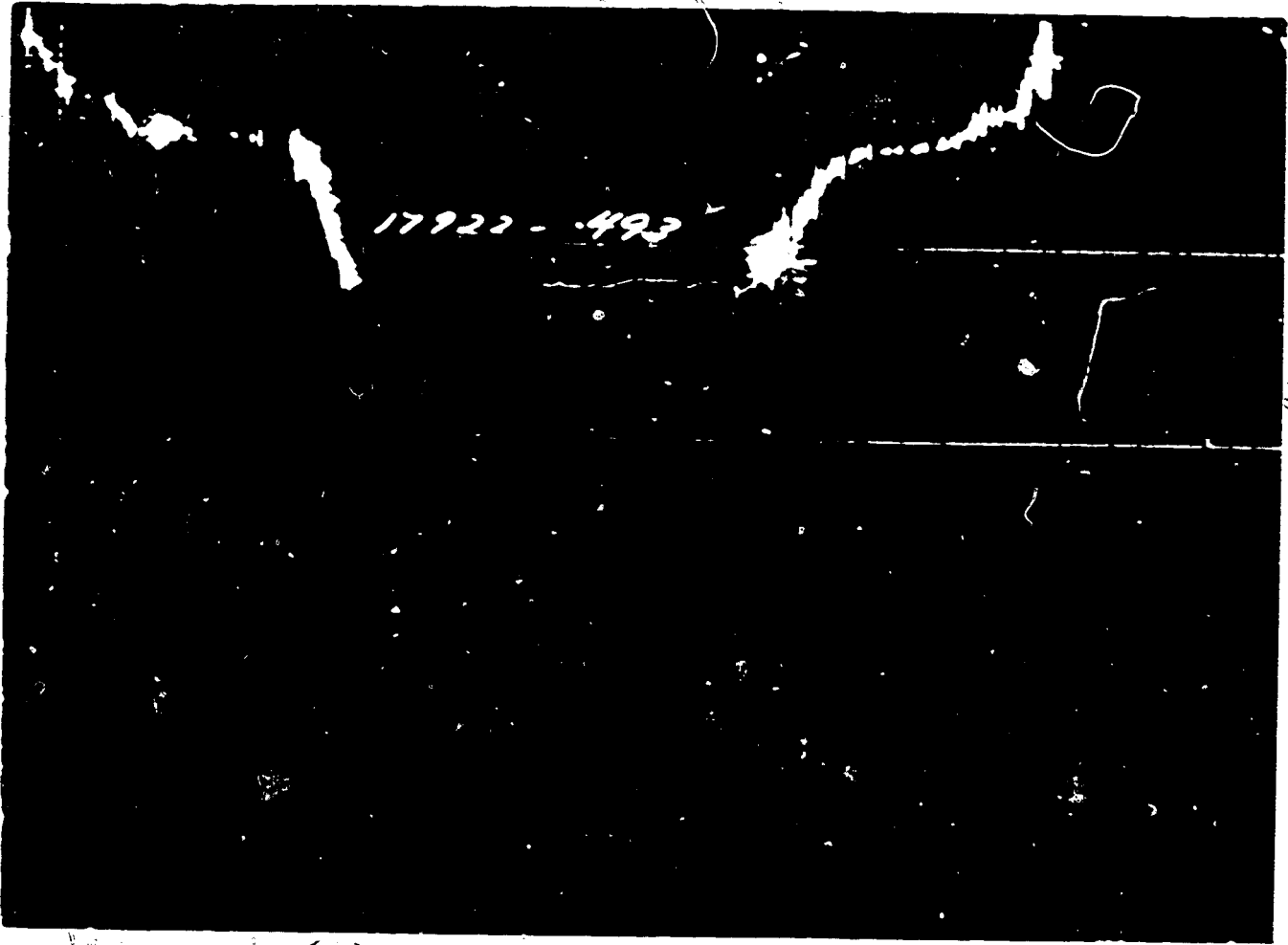
Formation Testing Service Report



// Each Horizontal Line Equal to 1000 p.s.i.







BT No. 2126 Depth 1702			12 Hr. Clock No.				Temperature Corrected to				Q		7	
1st Flow Pressure			Initial CIP				2nd Flow Pressure				Final CIP			
Time Dn. 000" T-P10	PSIG Temp. Corr.	Time Dn. 000" 0	T-0	T-0 °	PSIG Temp. Corr.	PSIG 10° 15°	Time Dn. 000" T-P10	PSIG Temp. Corr.	Time Dn. 000" 0	T-0	T-0 °	PSIG Temp. Corr.	PSIG 10° 15°	
P0	.000	459	.0000		285		.000	54	.000			545		
P1	.025	107	.0615		647		.039	161	.062			640		
P2	.050	285	.1230		647		.078	201	.124			644		
P3			.1845		647		.117	236	.186			644		
P4			.2460		647		.156	293	.248			644		
P5			.3075		647		.195	322	.310			644		
P6			.3690		647		.234	358	.372			644		
P7			.4305		647		.273	393	.434			644		
P8			.4920		647		.312	427	.496			644		
P9			.5535		647		.351	457	.558			644		
P10			.6150		647		.390	545	.620			644		

BT No. 1453 Depth 1735			12 Hr. Clock No.				Temperature Corrected to 98 °F						
1st Flow Pressure			Initial CIP				2nd Flow Pressure			Final CIP			
Time Dn. 000" T-P10	PSIG Temp. Corr.	Time Dn. 000" 0	T-0	T-0 °	PSIG Temp. Corr.	PSIG 10° 15° (Gas)	Time Dn. 000" T-P10	PSIG Temp. Corr.	Time Dn. 000" 0	T-0	T-0 °	PSIG Temp. Corr.	PSIG 10° 15° (Gas)
P0	.000	296	.000		98		.000	100	.000			465	
P1	.009	184	.059		656		.033	137	.060			651	
P2	.018	98	.118		659		.066	187	.120			656	
P3			.177		659		.099	230	.180			656	
P4			.236		659		.132	274	.240			656	
P5			.295		659		.165	313	.300			656	
P6			.354		659		.198	349	.360			656	
P7			.413		659		.231	381	.420			656	
P8			.472		659		.264	413	.480			656	
P9			.531		659		.297	440	.540			656	
P10			.590		659		.330	465	.600			656	

Intervals of Pressure Readings (Minutes): 1st Flow Pressure 1.5 Initial CIP 9.0 2nd Flow Pressure 6.0 Final CIP 9.0

Remarks:

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR'S NAME W. H. Huff Bros. 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 29 1954
 LEASE NAME Amman Spring Farm WELL NO. 64 FIELD W. H. Huff

FIRST TOUR FROM 12 P. M. TO 8 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12:00	12:15				Run Service ✓ BOP'S
12:15	1:00				Run to Cement Plug #1.
1:00	1:30				Mix & Dis. Plug No #1.
1:30	1:45				Plug 15 STDS.
1:45	2:00				Mix & D.S. Plug No 2.
2:00	2:30				W.O.C. Lay Down D.P. & TEAR OUT

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE 8

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
18.5	BBLS.								
65	Sax + 2% CaCl ₂	(2900 - 2700)							DISPLACE E
75	Sax + 3% CaCl ₂	(1700 - 2150)							DISPLACE E
12.5	BBLS.								
						DRILLER'S SIGNATURE <u>Paul Seaman</u>			

SECOND TOUR FROM 8 A. M. TO 4 P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:00	10:00				Free For Plug 2. @ 1850 E 1000 for Service
10:00	10:30				Worst To 480.
10:30	11:00				Run Plug #3.
11:00	11:30				W.O.C. Lay Down D.P. & TEAR OUT.

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
330	- 480	50 Sax + 3% CaCl ₂							DISPLACE E
1.5	BBLS.								
						DRILLER'S SIGNATURE <u>J. Frey</u>			

THIRD TOUR FROM _____ M. TO _____ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
7:00	7:30				W.O.C.
7:30	7:45				Free Plug No. 3. @ 375 E 500 for Plug.
7:45	7:55				Lay Down D.P.
7:55	8:05				Run B.O.P'S
8:05	8:15				Out BOP Csc 3' Below G.I.V. Plug Stop
8:15	8:30				E 5 Sax. Need Plug.
8:30	10:00				TEAR OUT. Key released 12:00 PM 10/29

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE 10 1/2

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
						DRILLER'S SIGNATURE <u>Kenneth Prosser</u>			

APPROVED

PAN AMERICAN REPRESENTATIVE

APPROVED

CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 34 CONTRACTOR'S NAME Frankoff Bros 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 28 1968
LEASE NAME San Antonio Chiquito River WELL NO. A-1 FIELD W. 1st

FIRST TOUR FROM 12 A.M. TO 9 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC
FROM	TO		FROM	TO	
12:00	12:15				Reig Service & BOP'S
12:15	1:15				Final Shut in
1:15	5:00				Pull out Test #3 & break
					Tool down.
5:00	8:00				Wait on Orders.
					Days Camp in Operation 6.2 Days.
					Days Bailer in Operation 3.0 Days.

DAYWORK: HOURS	RATE	HOURS	3	RATE	4/5 P.P.	HOURS W/D PIPE	5
----------------	------	-------	---	------	----------	----------------	---

DAYWORK: HOURS		RATE		HOURS				B.T NO.	SIZE	KIND
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL LOSS	CAKE				
D.S.T.#3	1718 - 2144 (CANADIAN)							19	6 3/4	FLOW-J REED
G.L. PUFF.	WEAK AIR BLOW DECREASING TO VERY WEAK. REC 970									
very slightly GAS CUT	DEVIATION ESTIMATED 1/2 INCH OFF									
1.5 H.P. 65%	F.F.D 465 I.H.P. 761							2 FLOW	60"	FSI 900
1. A.P. 97	FSN 650 F.H.P. 747							DRILLER'S SIGNATURE		How Squidron

SECOND TOUR FROM 9 A.M. TO 11 P.M.

[illegible]

	HOURS	RATE	HOURS	RATE	HOURS W/D PIPE
DAYWORK:					

[illegible]

THIRD TOUR FROM _____ M. TO _____

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
1200	415				Rig down - P.O.P.
415	615				W.D.
615	700				Run in open end
700	900				Run in open end
900	1200				Run + Rig up Halliburton

[illegible][illegible]

APPROVED _____
AMERICAN REPRESENTATIVE

APPROVED [Signature]
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR'S NAME Franklin & Sons 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 23 1962
 LEASE NAME Pan American Shallow Research WELL NO. A-1 FIELD W/beat

FIRST TOUR FROM 12 P.M. TO 8 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
1200	1215				Rig Service & BOP's
1215	1230				Finish Pulling Trip
1230	215				Run in to Circulate
215	330				Calan 30' to bottom
330	430				Circulating work pipe
430	630				Start to test
630	800				Make up hole #2.

DAYWORK: HOURS _____ RATE _____ HOURS 1 1/2 RATE W/O D.P. HOURS W/D PIPE 6 1/2

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
									18 6 3/4, F&S-T Reed
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
							Days camp in Operation 1 Day		
							Days later in Operation 1 Day		
							R. S. Signature		

SECOND TOUR FROM 8 A.M. TO 4 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
800	1015				Rig Service & BOP
815	900				MAKE UP TEST TOOL
900	945				WORK ON ELEVATORS
945	1100				RUN IN W/ PACKER
1100	1130				TRY TO SEAT PACKER
1130	1150				TRIP OUT
1150	200				WELD ON TONGS
200	400				DRAG A DAY W/ PACKER TRIP OUT

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE W/O D.P. HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
							John King		

THIRD TOUR FROM _____ M. TO _____

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
400	415				Rig Ser. & BOP's
415	445				W/O. DAD's
445	800				Run in 125 ft. D. Pipe Pack on 13 ft. collars + Test Tool
800	905				Run in Test #3
905	1045				Open Packer
1045	1145				Open in. Packer
1145	1200				Start in

DAYWORK: HOURS _____ RATE _____ HOURS 1 3/4 RATE W/O D.P. HOURS W/D PIPE 6 1/4

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
							R. S. Signature		

APPROVED _____

PAN AMERICAN REPRESENTATIVE

APPROVED _____

CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR'S NAME Edwin Kuehff Bros. 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 25 1960

LEASE NAME Don Amerson Granger River WELL NO. A-1 FIELD W-1 C-1

FIRST TOUR FROM 12 A.M. TO 8 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC
FROM	TO		FROM	TO	
12:00	12:15				Log since 1 BOP'S Log with Schlumberger.
12:15	2:00				
					Days casing in Operation 60 Days Days boiler in Operation 18 Days

DAYWORK: HOURS _____ RATE _____ HOURS 8 RATE W/D D.P HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		1:00	8.4	27				118	6 3/4	F6c 4-J REED
		DEVIATION INSTRUMENT			DEPTH		DEGREES OFF			
									DRILLER'S 	

SECOND TOUR FROM 8 A.M. TO 4 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:00	8:15				RIG SERVICE CHECK BARS
8:15	10:15				LOGGING W/ SCHLUMBERGER
10:15	10:30				TEAR OUT SAME
10:30	11:00				START MAKE UP TEST DROPPED STAND
11:00	12:00				WORK ON ELEVATOR'S BRK LATCH
12:00	1:45				RUN IN OPEN END
1:45			2200		CIRC FISH & TRIP OUT

DAYWORK: HOURS _____ RATE _____ HOURS 3 RATE W/O D.P. HOURS W/D PIPE 4

[illegible]

THIRD TOUR FROM 4 P. M. TO 12. 4

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
00	4:15				Run down + BOPs
15	5:00				First fish
20	6:14				Run in 12 Stand Pipe + Packer + 2 2 1/2 Collars
25	7:00				Make up Test Tool + 2 1/2 Collars
30	8:30				Run in Open End
35	12:00				Circ fish Trip out + tear down Test tools

DAYWORK:	HOURS	RATE	HOURS	RATE	HOURS W/D PIPE
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[illegible]

APPROVED *[Signature]*
AN AMERICAN REPRESENTATIVE

APPROVED S. Krich
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACT NAME Drinking Water 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 25 1968
LEASE NAME Pan American Shingen River WELL NO. A-1 FIELD W. 60

FIRST TOUR FROM 12:00 P.M. TO 8:00 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.						
FROM	TO		FROM	TO							
12:00	12:15				Rig Service ✓ B.O.P.'S						
12:15	1:00				Run 22 stands in 100 ft						
1:00	2:00				Circulate prior to test						
2:00	2:10				Summary						
2:10	4:00				Run back to test						
4:00	4:30				Run down core lib.						
4:30	5:00				Run 4 stands up testing tool						
5:00	5:00				Run in 1/2" test						
DAYWORK: HOURS		RATE		HOURS W/D PIPE							
QUANTITY	MUD MATERIAL ADDED		TIME	WT.	VIS.	FL. LOSS	CAKE	SIT NO.	SIZE	KIND	
	WATER		1.00	8.4	28			18	634	4-5	REC'D
DEVIATION INSTRUMENT			DEPTH		DEGREES OFF						
Totco			2900		4 3/4		Drops came in Operation 59 days				
							Drops holes in Operation 46 days				
							DRILLER'S SIGNATURE <u>John S. [Signature]</u>				

SECOND TOUR FROM 8:00 A.M. TO 4:00 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.					
FROM	TO		FROM	TO						
8:00	8:15				RIG SERVICE ✓ B.O.P.'S					
8:15	9:00				HEAD UP FOR DST NO. 1					
9:00	9:30				CLOSE TOOL IN					
9:30	10:00				OPEN TOOL					
10:00	12:30				SHUT IN					
12:30	3:00				TRIP OUT W/ PACKER					
3:00	4:00				DRAG DOWN TOOL					
DAYWORK: HOURS		RATE		HOURS W/D PIPE						
QUANTITY	MUD MATERIAL ADDED		TIME	WT.	VIS.	FL. LOSS	CAKE	SIT NO.	SIZE	KIND
1836	1836-1900 (CAMBRIAN)									
1199	P.L. Brown Drilling W. 1/2" REC.							1750'	FRESH WATER	
1136	F.S.P. 1199							1. F. 5 MMS.	151 90, Flow	
1207	F.A.P. 1136							60. F.S.P. 60		
	F.A.P. 1207									
DEVIATION INSTRUMENT			DEPTH		DEGREES OFF					
							DRILLER'S SIGNATURE <u>John S. [Signature]</u>			

THIRD TOUR FROM 4:00 P.M. TO 12:00 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.					
FROM	TO		FROM	TO						
4:00	4:15				Rig Service ✓ B.O.P.'S					
4:15	5:00				Back down key down Posher					
5:00	7:00				High out Posher 1/2" down in					
7:00	8:00				Run 4 1/2" drill					
8:00	9:00				Core + work type					
9:00	10:30				Work to log					
10:30	11:00				Rig up logs					
11:00	12:00				Log 1/2" down					
DAYWORK: HOURS		RATE		HOURS W/D PIPE						
QUANTITY	MUD MATERIAL ADDED		TIME	WT.	VIS.	FL. LOSS	CAKE	SIT NO.	SIZE	KIND
DEVIATION INSTRUMENT			DEPTH		DEGREES OFF					
							DRILLER'S SIGNATURE <u>Harmon Proctor</u>			

APPROVED

PAN AMERICAN REPRESENTATIVE

APPROVED

CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR'S NAME Ben Kubeff Bros. 24 HOUR PERIOD Oct 24 1968
LEASE NAME Pan American Chicago River WELL NO. B-1 FIELD W. Cat.

FIRST TOUR FROM 12:00 A.M. TO 8:00 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC					
FROM	TO		FROM	TO						
12:00	12:15				Rig Service & BOP'S					
12:15	3:15				Finish painting for Bit #17 and pull back in w/Bit #18.					
3:15	3:30				Ream 10' to Bottom					
3:30	8:00		2731	2795	Drilling 6 3/4" hole. Days Camp in operation 58 days Days Drills in operation 16 days					
DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE 8										
QUANTITY	MUD MATERIAL ADDED		TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
	WATER		4:00	8.4	28			18	6 3/4	FOG-T REED
			6:00	9.4	28					
			DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
									DRILLER'S SIGNATURE Ron Sigurdson	

SECOND TOUR FROM 8 A.M. TO 4 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.					
FROM	TO		FROM	TO						
8:00	8:15				RIG SERVICE CHECK BOP					
8:15	4:00		2785	2855	DRILL 6 3/4 HOLE					
DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED		TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
	N7L			8.4	28			18	6 3/4	REED FBCV-J
			DEVIATION INSTRUMENT		DEPTH	DEGREES OFF				
								DRILLER'S SIGNATURE <i>John F. ...</i>		

THIRD TOUR FROM M. TO M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.						
FROM	TO		FROM	TO							
8:00	8:15				Ream down & BOP's						
8:15	9:15				Drill						
9:15	10:15				Circ & Work Pipe						
10:15	12:00				Have 22 Stand. Drilling 6 3/4" hole						
DAYWORK: HOURS RATE HOURS RATE HOURS W/D PIPE 8											
QUANTITY	MUD MATERIAL ADDED		TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
				8.4	28				18	6 3/4	Reed FBCV-J
			DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
					27 1/2'		6 1/2"				
									DRILLER'S SIGNATURE K Proctor		

APPROVED [Signature]
PAN AMERICAN REPRESENTATIVE

APPROVED [Signature]
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR'S NAME Pen Kertoff Bros. 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 23 1969
LEASE NAME Pen American Shanger River WELL NO. B-1 FIELD W. Cat.

FIRST TOUR FROM 12:00 M. TO 8:00 M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ¹⁵				Rig Service & ✓ BOP'S
12 ¹⁵	8 ⁰⁰		2530	2602	Pulling 6 3/4" cable.
					Days lamp in operation 57 days
					Days boiler in operation 12 days
					15

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		2:00	8.4	28			17	6 3/4	Fbcu-J Ried
		6:00	8.4	28					
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
								DRILLER'S SIGNATURE <i>Bo Sigmundson</i>	

SECOND TOUR FROM 4 A.M. TO 4 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8 ⁰⁰	8 ⁰⁰		2602	2606	DRILL 6 3/4 HOLE
9 ⁰⁰					RIG SERV. V BOP + CHANGE OIL
	9 ³⁰				+ FILTERS IN FLOOR MOTOR + AIR COMP.
9 ³⁰	2 ⁰⁰		2606	2638	DRILL 6 3/4 HOLE
2 ⁰⁰	2 ¹⁵				SURVAF
2 ¹⁵	4 ⁰⁰		2638	2650	DRILLING 6 3/4 HOLE

DAYWORK	HOURS	RATE	HOURS	RATE	HOURS W/D PIPE

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			8.4	28			17	6 3/4	REGO FCCL - 3
		DEVIATION INSTRUMENT	DEPTH	DEGREES OFF					
		TOT 00	2638	6°					
							DRILLER'S SIGNATURE		

THIRD TOUR FROM _____ M. TO _____ M.

[illegible]

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

[illegible]

APPROVED [Signature]
PAN AMERICAN REPRESENTATIVE

APPROVED [Signature]
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

 RIG NUMBER 31 CONTRACTOR'S NAME BRINKERHOFF Bros 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 22 19 68

 LEASE NAME AN AM CRANFORD PUMP WELL NO. A-1 FIELD 44/10

 FIRST TOUR FROM 12⁰⁰ A.M. TO 8⁰⁰ P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ³⁰				Rig Service & V BOP'S
12 ³⁰	1 ³⁰				Run in with Bit #16
1 ³⁰	1 ³⁰				Run 3' to Bottom
1 ³⁰	8 ⁰⁰		2387	2453	Drilling 6 3/4" hole
					Days Trip in Operation 56 days
					Days boiler in Operation 14 days

 DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE 8

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		2 ⁰⁰ AM	8.5	28			16	6 3/4	N742T SEC.
		6 ⁰⁰ AM	8.4	28					
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF				
							DRILLER'S SIGNATURE <u>Red Signature</u>		

 SECOND TOUR FROM 8 A.M. TO 4 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8 ⁰⁰	9 ⁰⁰		2453	2460	DRILL 6 3/4" HOLE
9 ⁰⁰	9 ¹⁵				SURVAY
9 ¹⁵	9 ²⁰				RIG SERVICE ✓ BOP'S
9 ²⁰					TRIP FOR BIT & CLEAN
	12 ⁰⁰				10' FILL
12 ⁰⁰	4 ⁰⁰		2460	2481	DRILL 6 3/4" HOLE

 DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE 8

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		2 ⁰⁰	28				17	6 3/4	REED F804-T
		8.4							
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF				
				2460	6 1/2		DRILLER'S SIGNATURE <u>John Fay</u>		

 THIRD TOUR FROM 4⁰⁰ P.M. TO 12⁰⁰ P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4 ⁰⁰	4 ¹⁵				Rig Service & BOP'S
4 ¹⁵	4 ¹⁷		2481		Drill 6 3/4" hole
4 ¹⁷	4 ⁴⁵		2514		2514 2530 Run in with Bit #16
4 ⁴⁵	12 ⁰⁰		2514	2530	Drill 6 3/4" hole

 DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE 7 1/2

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
							17	6 3/4	REED F804-T
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF				
							DRILLER'S SIGNATURE <u>Karin Prusti</u>		

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PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR NAME BRINKERHOFF BROS. 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 21 19 68
 LEASE NAME Pan Am CRAINER RIVER WELL NO. A1 FIELD NILCAT
 FIRST TOUR FROM 12⁰⁰ M. TO 8⁰⁰ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ¹⁵				Rig Service + Bore.
12 ¹⁵	1 ¹⁵				Finish running in cut bit
1 ¹⁵	1 ³⁰				Run 5' to bottom
1 ³⁰	8 ⁰⁰		2152	2234	Drill.
					Days Camp in Operation 55 days
					Days holes in Operation 13 days

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		
QUANTITY	MUD MATERIAL ADDED	TIME	W	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		2:00	84	28				15	6 3/4	REED SC46-J
		6:00	84	28						
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
								DRILLER'S SIGNATURE Gordon Kibuchi		

SECOND TOUR FROM 8⁰⁰ M. TO 4⁰⁰ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8 ⁰⁰	8 ¹⁵		2234		Rig Service at 2 BOP'S
8 ¹⁵	4 ⁰⁰		2327		Drilling 6 3/4" Hole

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE		8
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		10:00 PM	84	28				15	6 3/4	Reed SC46-J
		2:00 PM	84	28						
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		DRILLER'S SIGNATURE		
	7							Reed Signature		

THIRD TOUR FROM 4 P.M. TO 12 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4 ⁰⁰	4 ¹⁵				RIG SERVICE & CHECK BOP'S
4 ¹⁵	4 ³⁰		2327	2327	DRILL 6 3/4" HOLE
4 ³⁰	4 ⁴⁵				SURVAY
4 ⁴⁵	12 ⁰⁰				TRIP FOR BIT

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			8.4	28			15	6 3/4	SC46-J REED
							16	6 3/4	H746-J SEC.
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
		TATCO		2327		6°		DRILLER'S SIGNATURE	
								Oshin King	

APPROVED [Signature] PAN AMERICAN REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR'S NAME SPINKERHOFF BROS. 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 20 1968
LEASE NAME PAN AM GRAINGER RIVER WELL NO. A-1 FIELD WINDCOT
FIRST TOUR FROM 1200 M. TO 200 M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION. WORK PERFORMED. CONDITION OF HOLE. DIFFICULTIES ENCOUNTERED. UNUSUAL WEATHER CONDITIONS. OIL OR GAS SHOW IN MUD. ETC
FROM	TO		FROM	TO	
12 ⁰⁰	12 ¹⁵				Rig Service & Bops.
12 ¹⁵	12 ³⁰				Finish running in hole
12 ³⁰	1 ³⁰				Rig up water line to mud tank
1 ³⁰	8 ⁰⁰				Days Days
					Days camp in operation 54 days
					Days boiler in operation 20 days
					12

DAYWORK	HOURS	RATE	HOURS	RATE	HOURS W/D PIPE

DAYWORK: HOURS		DATE		TIME		WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
QUANTITY	MUD MATERIAL ADDED												
		2:40	8:6	28							13	6 3/4	HW X 5 5/8
		6:00	8:4	28									2R 301
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF							
								DRILLER'S SIGNATURE <i>Harold K. Kocky</i>					

SECOND TOUR FROM 9 A M. TO 4 P M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:00	8:15				Rig down in 30 ft
8:15	8:30		2094	2148	Drilled 6 3/4" hole
8:30	8:45				Runway
8:45	9:00				Tris out
9:00	9:15				pick up core bit
9:15	9:30				Clean mud tanks

DAY	WORK HOURS	RATE	HOURS	RATE	HOURS W/D PIPE

DAYWORK HOURS		TIME		WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
QUANTITY	MUD MATERIAL ADDED									
		9:00	9:4	28				13	6 3/4	HW 1538
		1:00	9:4	28						ZB 301
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
		Total		2148		5 1/2		DRILLER'S SIGNATURE John Spears		

THIRD TOUR FROM 4 P M. TO 12 A M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4:00	4:15				RIG SERVICE CRACK BOPS
4:15	6:00				TRIP IN W/ CORE B.C. AND
6:00					BEAM BRIDGE AT 2010
6:30	7:00			21482152	COT CORE NO. #2
7:00	11:15				HOLE
11:15	11:45				HANDLING CORE & SERVICE BARREL
11:45	12:00				RUN IN

DAYWORK		HOURS	RATE	HOURS	RATE	HOURS W/D PIPE	KIND

DAYWORK RECORD										KIND	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE			
	CORE #2 2148-2152						14	6 1/8"	CHRIS.	✓	
	REC 4°								EC-10804		
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		15	6 3/4"	REC SCH 64	
									285 ± 53		
								DRILLER'S SIGNATURE	John F. [Signature]		

APPROVED

D. G. [Signature]
PAN AMERICAN REPRESENTATIVE

APPROVED

CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR'S NAME BRENNER OF BOS. 24 HOUR PERIOD ENDING AT MIDNIGHT OCT 19 1952
 LEASE NAME PAN-AM GREENSBORO RIVER WELL NO. D-1 FIELD _____

FIRST TOUR FROM 12⁰⁰ A.M. TO 9⁰⁰ A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ¹⁵				Rig Service + Bops
12 ¹⁵	9 ⁰⁰		1835	1927	Drill 6 3/4 hole
					Days Lamp in Operation 53 days
					Days Trailer in Operation 119 days
					Days Trailer in Operation 9 days

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE 8

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		2:40	8.5	28				11 6 3/4	REED YMG-J REED
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF				
							DRILLER'S SIGNATURE <u>London Kakehi</u>		

SECOND TOUR FROM 9 A.M. TO 4 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
9 ⁰⁰	9 ⁰⁰		1927	1936	Drill 6 3/4 hole
9 ⁰⁰	9 ¹⁵				Survey
9 ¹⁵	9 ³⁰				Rig Serv. V BOPS
9 ³⁰	11 ³⁰				Ship for bit
11 ³⁰	4 ⁰⁰		1936	1990	Drilling 6 3/4 hole

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE 8

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			9.5	28				11 6 3/4	REED YMG-J
								12 6 3/4	REED YMG-J
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF				
		Tolco		1936	5		DRILLER'S SIGNATURE <u>John S. Lewis</u>		

THIRD TOUR FROM 4 P.M. TO 12 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4 ⁰⁰	4 ¹⁵		1990		Rig Serv. V BOPS
4 ¹⁵	6 ⁰⁰		2000		Drill 6 3/4 hole
6 ⁰⁰	7 ³⁰				Lost Circulation Pump Down
7 ³⁰	7 ³⁰				200 BBS OF WATER
7 ³⁰	9 ⁰⁰		2020		Drill 6 3/4 hole
9 ⁰⁰	9 ¹⁵				Survey
9 ¹⁵	12 ⁰⁰				TRIP FOR BIT

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE 8

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
								12 6 3/4	REED YMG-J
								13 6 3/4	HV X55R-J
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF				
		TOTCO		2024	5 1/8		DRILLER'S SIGNATURE <u>John F. ...</u>		

APPROVED [Signature] PAN AMERICAN REPRESENTATIVE

APPROVED [Signature] CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR SHANKERHOFF BROS. 24 HOUR PERIOD Oct 18 1948
 LEASE NAME Am GRAINGER RIVER WELL NO. A4 FIELD _____
 FIRST TOUR FROM 1200 A.M. TO 200 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	1 ¹⁵				Reg Service & BOPS.
1 ¹⁵	1 ³⁰				3 inch running in wet core barrel
1 ³⁰	2 ⁰⁰		1750	1768	+ beam 20' to bottom
					Coring Core #1
					Days camp in operation 52 days
					Days bottom in operation 10 days

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
							9	6 1/16	Class 0
									BC 9214
DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		DRILLER'S SIGNATURE			
						Gordon Kikuchi			

SECOND TOUR FROM 8 A.M. TO 4 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8 ⁰⁰	8 ⁰⁰		1768	1770	Cutting Core #1
8 ¹⁵	8 ¹⁵				Big Shero 130 P.
8 ³⁰	8 ³⁰				Run Core #1
8 ⁴⁵	8 ⁴⁵				Return Core #1
9 ⁰⁰	9 ⁰⁰				Run in W/1 bit #10
9 ¹⁵	9 ¹⁵		1767	1770	Run under gauge hole 3 feet
9 ³⁰	9 ³⁰		1770	1793	Drilling 6 1/2 inch hole

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			8428				10	6 1/4	SEC 11700-1
DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		DRILLER'S SIGNATURE			
						John Spaw			

THIRD TOUR FROM 4 P.M. TO 12 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ⁰⁰				RIG SERVICE & BOPS
12 ¹⁵	12 ¹⁵		1793		DRILL 6 1/4 HOLE
12 ³⁰	12 ³⁰		1805		TRIP FOR BIT
12 ⁴⁵	12 ⁴⁵		1805	1824	DRILL 6 1/4 HOLE

DAYWORK: HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			8428				10	6 1/4	HTDQ-T SEC
							11	6 1/4	HTDQ-T REED
DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		DRILLER'S SIGNATURE			
						John Spaw			

APPROVED [Signature] PAN AMERICAN REPRESENTATIVE

APPROVED [Signature] CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

 RIG NUMBER 32 CONTRACTOR'S NAME SPINKERHOFF BROS. 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 17 1968

 LEASE NAME PAN Am. Beringer River WELL NO. A-1 FIELD

 FIRST TOUR FROM 12:00 A.M. TO 8:00 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12:00	12:15				Big Service + BOP.
12:15	1:00		1675	1686	Only
1:00	1:15				Circ. Sample + Survey
1:15	5:15				Trip
5:15	6:00				Beam 30' to Bottom
6:00	8:00		1686	1702	Only. Days Camp in operation 51 days Days take in operation 9 days

DAYWORK HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			86	29			6	6 3/4	Red vmg
							7	6 3/4	SEC #746
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
		Totco		1686		5'		DRILLER'S SIGNATURE <u>Robert Kabeck</u>	

 SECOND TOUR FROM 8 A.M. TO 4 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:00	8:15				Big serv + BOP.
8:15	10:15		1702	1714	Drilling
10:15	10:30				Spinning
10:30	11:00				Beam for first
11:00	11:30				Beam mud tanks
11:30	1:00				Beam in well
1:00	1:15				Beam 10 feet to bottom

DAYWORK HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			84	28			7	6 3/4	SEC #746
							8	6 3/4	HVN #55R
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
		Totco		1714		5'		DRILLER'S SIGNATURE <u>John Sauer</u>	

 THIRD TOUR FROM 4 P.M. TO 12 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4:00	4:15				RIG SERVICE + BOP.
4:15	8:00		1720	1750	DRILL 6 3/4 HOLE
8:00	8:15				FOR VAP
8:15	9:00				HOIST TO CORE + SLM.
9:00	11:00				PICK UP + SERVICE CORE BBL
11:00	12:00				TRIP IN

DAYWORK HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
							8	6 3/4	HVN #55R
							9	6 3/4	QCORIS EC 7014
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
		Totco		1750		5 1/2'		DRILLER'S SIGNATURE <u>John Troy</u>	

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PAN AMERICAN REPRESENTATIVE

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CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR'S NAME SPINKERHOFF BROS. 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 16 1968
 LEASE NAME PAN AM GRANGER RIVER WELL NO. A-1 FIELD

FIRST TOUR FROM 12⁰⁰ A.M. TO 8⁰⁰ A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ¹⁵				Rig Service + BOPS.
12 ¹⁵	1 ⁴⁵		1108	1169	Log. 50 Days Lamp in operation on 16/68
1 ⁴⁵	2 ⁰⁰				Survey 8 Days back in operation on 16/68
2 ⁰⁰	2 ⁴⁵		1161	1293	Log.
2 ⁴⁵	3 ⁰⁰				Survey
3 ⁰⁰	4 ³⁰				Log.
4 ³⁰	4 ⁴⁵				Survey
4 ⁴⁵	5 ³⁰		1514		Log.
5 ³⁰	5 ⁴⁵				Survey
5 ⁴⁵	6 ⁰⁰				Log.

DAYWORK HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			33	28			5	6 3/4	Reed YT3-R
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		DRILLER'S SIGNATURE	
		TGT40		1159		5 1/4		Landon K. Kishi	
				1235		4 1/2			
				1230					
				1214					

SECOND TOUR FROM M. TO M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8 ⁰⁰	8 ¹⁵				Rig Service + BOPS.
8 ¹⁵	12 ⁰⁰				Tip for survey log and plugged bit
12 ⁰⁰	11 ⁰⁰		1514	1590	Drilling 6 3/4" hole

DAYWORK HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			24	28			6	6 3/4	YM5 733490
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		DRILLER'S SIGNATURE	
		Tolco		204		6		John S. Searls	
				1514		5			

THIRD TOUR FROM 11 P.M. TO 12 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ¹⁵				RIG SERVICE + BOPS
12 ¹⁵	12 ⁰⁰		1590	1675	DRILLING 6 3/4" HOLE

DAYWORK HOURS		RATE		HOURS		RATE		HOURS W/D PIPE	
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
			25	28			6	6 3/4	YM-1 REED
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF		DRILLER'S SIGNATURE	
								John S. Searls	

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CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR'S NAME BRINKERHOFF BOOS 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 15 1968
LEASE NAME PAN AM CRAINER RIVER WELL NO. A-1 FIELD _____
FIRST TOUR FROM 1200 P.M. TO 800 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
200	1215				Rig SERVICE
255	1115				Drill mouse hole
315	1145				Pressure up blind rams 1000 lbs OK
45	215				Run in with 6 3/4 bit
115	310				Pressure up pipe rams + hydrill Drlg
300	800				Out shoe + float

431 816 Drlg

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		8.4	28				H	6 3/4	YT3-R
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
							Kokaki		

SECOND TOUR FROM 800 A.M. TO 400 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
800	815				Rig Serv & BOP clamp in operation 49 days out 15/68
815	1000		516	574	Drilling Bore in operation 7 days out 15/68
1000	1030				Try to redrill mouse hole
1030	1200		574	640	Drilling
1200	1215				Remove mud from D 175 pump
1215	200		640	732	Drilling
200	215				Survey
215	400		732	794	Drilling

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
							H	6 3/4	YT3-R REED
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
		Total		732	3		John Spear		

THIRD TOUR FROM 4 P.M. TO 12 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
400	415				Rig SERV. & BOP
415	700		794	1013	Drlg 6 3/4 hole
700	715				DROP SBARAY
715	1000				TRIP FOR BIT
1000	1045		1013	1045	Drlg 6 3/4 hole
1045	1100				SBARAY
1100	1130		1045	1076	Drlg
1130	1145		1076	1108	Drlg

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		8.4	28				H	6 3/4	YT3-R REED
							H	6 3/4	YT3-R REED
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
		Total		1013	6°		John Spear		
		"		1045	6°		S. Prischub		

APPROVED _____

APPROVED _____

CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR'S NAME Brinkhoff 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 14 1968
LEASE NAME Pan Am Bridge River WELL NO. A-1 FIELD

FIRST TOUR FROM _____ M. TO _____ M.

[illegible]

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

DAILY LOG										
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
								DRILLER'S SIGNATURE		Rosmi Prasher

SECOND TOUR FROM _____ M. TO _____ M.

[illegible]

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

DAYWORK HOURS									
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
								DRILLER'S SIGNATURE	Ledian Lakuchi

THIRD TOUR FROM _____ M. TO _____ M.

[illegible]

DAYWORK HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/O MP _____

QUANTITY		MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
			DEVIATION INSTRUMENT			DEPTH	DEGREES OFF				
									DRILLER'S SIGNATURE <i>John Speart</i>		

APPROVED _____
PAN AMERICAN REPRESENTATIVE

APPROVED _____
CONTRACTOR'S REPRESENTATIVE

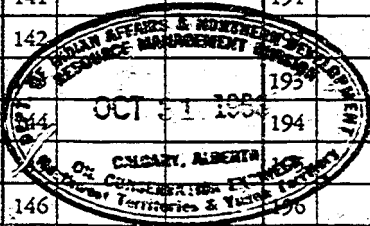
PAN-AMERICAN PETROLEUM CORPORATION

PIPE TALLY AND CEMENTING RECORD

LEASE Pan Am A-1 Enbridge WELL No. 100 DATE Oct 13, 1968 19 68
 PIPE RUN, SIZE 7 5/8 WEIGHT 29.7 GRADE N80 TYPE JOINT LTC MAKE AMERICAN NO. FT. 426.26
 PIPE RUN, SIZE WEIGHT GRADE TYPE JOINT MAKE NO. FT.

NO.	LENGTH OF JOINT		NO.	LENGTH OF JOINT		NO.	LENGTH OF JOINT		NO.	LENGTH OF JOINT		NO.	LENGTH OF JOINT		TALLY OF JOINTS NOT RUN	
	FEET	IN.		FEET	IN.		FEET	IN.		FEET	IN.		FEET	IN.		
1	23	47	51			101			151			201			NO.	LENGTH OF JOINT
2	33	33	52			102			152			202				
3	32	82	53			103			153			203	Cut off		1	21
4	32	78	54			104			154			204			2	8
5	31	24	55			105			155			205			3	71
6	30	62	56			106			156			206			4	
7	33	48	57			107			157			207			5	
8	33	47	58			108			158			208			6	
9	33	60	59			109			159			209			7	
10	33	80	60			110			160			210			8	
11	29	67	61			111			161			211			9	
12	33	80	62			112			162			212			10	
13	33	48	63			113			163			213			11	
14	31	24	64			114			164			214			12	
15			65			115			165			215			13	
16			66			116			166			216			14	
17			67			117			167			217			15	
18			68			118			168			218			16	
19			69			119			169			219			17	
20			70			120			170			220			18	
21			71			121			171			221			19	
22			72			122			172			222			20	
23			73			123			173			223			21	
24			74			124			174			224			22	
25			75			125			175			225			23	
26			76			126			176						24	
27			77			127			177							
28			78			128			178							
29			79			129			179							
30			80			130			180							
31			81			131			181							
32			82			132			182							
33			83			133			183							
34			84			134			184							
35			85			135			185							
36			86			136			186							
37			87			137			187							
38			88			138			188							
39			89			139			189							
40			90			140			190							
41			91			141			191							
42			92			142			192							
43			93			143			193							
44			94			144			194							
45			95			145			195							
46			96			146			196							
47			97			147			197							
48			98			148			198							
49			99			149			199							
50			100			150			200							

13 426.26
 NO. JOINTS DELIVERED 14 458.77
 NO. JOINTS RUN 417.55/3 426.26
 FLEES 3.35
 TOTAL RUN - OVERALL 420.90/29.5
 OFF FOR THREADS 4.15
 TOTAL - THREADS OF 416.75 424.44
 TOP PIPE BELOW:
☒ ROTARY DRIVE BUSHING 14.27
☐ DERRICK FLOOR
 DEPTH LANDED 431.02 430.00
 CEMENT - MAKE CANADA Via WALK
 KIND USED SACKS
 NO. SACKS 240
 METHOD 2 1/2" 10 C&A2



REMARKS:
 Plug Down 12:00 PM
 10-13-68 Recommended
 From Top With 60
 Sacks of the 240
 Cement Top Sunk

APPROVED John D. Furt AN AMERICAN REPRESENTATIVE
W. J. ...

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR'S NAME W. H. HARRIS & SONS 24 HOUR PERIOD ENDING AT MIDNIGHT OCT. 12 1968
 LEASE NAME PAN AM PETROLEUM CO. R. 12 E. R. 12 E. R. 12 E. WELL NO. A-1 FIELD

FIRST TOUR FROM 10 P.M. TO 7 A.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12:30	1:30		316		Rig Service
1:45	2:00			350	Work Tight Hole
4:30	5:00				Trap Alert
5:00	8:00				Drilling 9 7/8 hole

DAYWORK: HOURS RATE HOURS RATE HOURS W/D PIPE

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
2	Cement	6:30	30	40			3	1 7/8	MANT SEC 68024
1	Super Col								
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
							J. H. HARRIS		

SECOND TOUR FROM 8:00 P.M. TO 4:00 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8:00	8:15	Rig Service			Rig Service
8:15	12:00	Super Col			Drilling 9 7/8 hole
12:30	4:00	Hole			Stuck in hole work S.P.E. Free
					Days Camp in operation 46' at 12/68
					Days Camp in operation 4' at 12/68

DAYWORK: HOURS RATE HOURS RATE HOURS W/D PIPE

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
5	Super Col	10:00	25	45			3	9 7/8	MANT SEC 68024
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
							J. H. HARRIS		

THIRD TOUR FROM 11 P.M. TO 11 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
11:00	1:00				Work Tight Hole
1:00	2:00				
2:00	3:00		316	470	Trap Alert
3:00	4:00				Drilling
4:00	6:00				Trap Alert
6:00	10:00				Drilling 9 7/8 hole

DAYWORK: HOURS RATE HOURS RATE HOURS W/D PIPE

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
75	GEL						7	1 7/8	MANT SEC
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
							J. H. HARRIS		

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PAN AMERICAN REPRESENTATIVE

APPROVED

CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR'S NAME BRINKERHUFF BROS. 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 11/68 1968LEASE NAME PAN Am GRAINGER WELL NO. A-1 FIELDFIRST TOUR FROM 8⁰⁰ M. TO 8⁰⁰ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
12 ⁰⁰	12 ¹⁵		42	104	Rig Run
12 ¹⁵	12 ³⁰				Shoring
12 ³⁰	4 ⁰⁰				Picking up Kelly Lock 1' cut off 7'
4 ⁰⁰	6 ⁰⁰				Drilling 9 3/4 hole
6 ⁰⁰	7 ³⁰				Survey try to get on bottom
7 ³⁰	8 ⁰⁰				Drilling

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
							24	9 3/4	Y TIA Reed
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
		TotCo		75		3			
				100		3			
								DRILLER'S SIGNATURE	

SECOND TOUR FROM 8⁰⁰ M. TO 4⁰⁰ M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
8 ⁰⁰	8 ¹⁵				Rig Run
8 ¹⁵	12 ¹⁵		104	164	Drill 9 3/4 Hole
12 ¹⁵	12 ³⁰				Survey
12 ³⁰	3 ⁰⁰		164	200	Drill
3 ⁰⁰	3 ³⁰				Work on pump section
3 ³⁰	4 ⁰⁰		200	214	Drill

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
1000	GEL			32			24	9 3/4	Y TIA Reed
50	Caustic								
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
		TotCo		164		2			
								DRILLER'S SIGNATURE	

THIRD TOUR FROM 4⁰⁰ P. M. TO 12⁰⁰ P. M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
4 ⁰⁰	4 ¹⁵				Rig Run
4 ¹⁵	6 ¹⁵		214	253	Drilling Days Campin Operation 450 cut 11/68
6 ¹⁵	6 ³⁰				Drilling Days Campin in Operation 3 days cut 11/68
6 ³⁰	8 ⁰⁰		253	312	Drilling
8 ⁰⁰	10 ⁰⁰				Work tight hole
10 ⁰⁰	11 ⁰⁰		312	316	Drilling
11 ⁰⁰	12 ⁰⁰				Work tight hole

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
350	GEL			40			1A	9 3/4	Y TIA REED
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF			
		TotCo		253		2			
								DRILLER'S SIGNATURE	

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PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 36 CONTRACTOR NAME SPINKERHOFF Bros 24 HOUR PERIOD ENDING AT MIDNIGHT OCT 10 1968
 LEASE NAME Pan Am GRAINGER WELL NO. A-1 FIELD

FIRST TOUR FROM 12 P.M. TO 8 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
<u>2:00</u>	<u>3:00</u>		<u>0</u>	<u>42</u>	<u>Spud in Drill Kelly down to pickup Drill collar</u>
<u>3:00</u>	<u>8:00</u>				<u>Drill rat hole boulders + GRAVEL</u>
					<u>K.B. to G.L. ELEV.</u>
					<u>12.20'</u>

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
				<u>28</u>			<u>1</u>	<u>9 7/8</u>	<u>S4 T I SEC</u>
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
							<u>K. Praski</u>		

SECOND TOUR FROM 8 P.M. TO 4 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
<u>2:00</u>	<u>4:00</u>				<u>Drill RAT hole boulders + GRAVEL</u>
					<u>DAYS CAMP in operation 4 1/2 / Oct 10/68</u>
					<u>boiler in operation 2 days Oct 10/68</u>

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
				<u>28</u>			<u>1</u>	<u>9 7/8</u>	<u>S4 T I SEC</u>
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		
							<u>B. Ko Praski</u>		

THIRD TOUR FROM 4 P.M. TO 12:00 M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
<u>4:00</u>	<u>4:15</u>				<u>Rat Scum</u>
<u>4:15</u>	<u>10:30</u>				<u>Drill RAT Hole</u>
<u>10:30</u>	<u>12:00</u>		<u>45</u>	<u>75</u>	<u>Drill 1 Drill Collar down</u>

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH	DEGREES OFF		DRILLER'S SIGNATURE		

APPROVED [Signature] PAN AMERICAN REPRESENTATIVE

APPROVED [Signature] CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR NAME Brinkerhoff Bros 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 9 1968
LEASE NAME Pan Am. Granger River WELL NO. B-1 FIELD _____

FIRST TOUR FROM 8 A M. TO 12 P M.

[illegible]

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

DAYWORK: HOURS										
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
								DRILLER'S SIGNATURE	<i>K. Praski</i>	

SECOND TOUR FROM 8 A. M. TO 12 P. M.

[illegible][illegible]

DAYWORK: HOURS										
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
									DRILLER'S SIGNATURE	S. K. K.

THIRD TOUR FROM 8 A M. TO 12 P M.

[illegible]

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

DAYWORK LOGS										
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
								DRILLER'S SIGNATURE	<i>J. Spears</i>	

APPROVED [Signature]
PAN AMERICAN REPRESENTATIVE

APPROVED [Signature]
CONTRACTOR'S REPRESENTATIVE

PAN AMERICAN PETROLEUM CORPORATION
DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR'S NAME BRINKERHOFF BROS 24 HOUR PERIOD ENDING AT MIDNIGHT Oct 8 1968
LEASE NAME Pan Am - A-1 BRAINER RIVER WELL NO. 2 FIELD 2

FIRST TOUR FROM 8:15 M. TO 8:15 M.

[illegible]

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

EXTRA WORK LOG										
QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
								DRILLER'S SIGNATURE <i>K. Pracki</i>		

SECOND TOUR FROM 8 A M. TO 10 P M.

[illegible]

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT			DEPTH	DEGREES OFF			
							DRILLER'S SIGNATURE <i>L. K. Karki</i>		

THIRD TOUR FROM 8 A M. TO 10 P M.

[illegible]

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE		BIT NO.	SIZE	KIND
		DEVIATION INSTRUMENT		DEPTH		DEGREES OFF				
								DRILLER'S SIGNATURE		

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PAN AMERICAN PETROLEUM CORPORATION

DAILY DRILLING REPORT

RIG NUMBER 38 CONTRACTOR'S NAME Brinkhoff 24 HOUR PERIOD ENDING AT MIDNIGHT Oct: 97 1968

LEASE NAME Pan-Am - 8-1 Casinger River WELL NO. _____ FIELD _____

FIRST TOUR FROM 8 A.M. TO 8 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
					MOVING Rig From RIVER Landing To WELL LOCATION

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND

DEVIATION INSTRUMENT _____ DEPTH _____ DEGREES OFF _____

DRILLER'S SIGNATURE J. Sprain

Oct 7/68 SECOND TOUR FROM 8 A.M. TO 8 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
					MOVING Rig From RIVER Landing To WELL LOCATION

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND

DEVIATION INSTRUMENT _____ DEPTH _____ DEGREES OFF _____

DRILLER'S SIGNATURE K. Pranki

Oct 7/68 THIRD TOUR FROM 8 A.M. TO 8 P.M.

TIME		OPERATION	DEPTH		DESCRIPTION OF FORMATION, WORK PERFORMED, CONDITION OF HOLE, DIFFICULTIES ENCOUNTERED, UNUSUAL WEATHER CONDITIONS, OIL OR GAS SHOW IN MUD, ETC.
FROM	TO		FROM	TO	
					MOVING Rig From RIVER Landing To WELL LOCATION

DAYWORK: HOURS _____ RATE _____ HOURS _____ RATE _____ HOURS W/D PIPE _____

QUANTITY	MUD MATERIAL ADDED	TIME	WT.	VIS.	FL. LOSS	CAKE	BIT NO.	SIZE	KIND

DEVIATION INSTRUMENT _____ DEPTH _____ DEGREES OFF _____

DRILLER'S SIGNATURE L. Kataraki

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CONTRACTOR'S REPRESENTATIVE