Western Atlas International®

ATLAS WIRELINE SERVICES

5" = 100'

COMPUTED DIPLOG

FILE NO. BLAC 447.0

API NO.

COMPANY NORTHWEST NATURAL GAS OREGON NATURAL GAS DEVELOPEMENT CORP.

WELL IW33AC-3

FIELD MIST

COUNTY COLUMBIA STATE OREGON

LOCATION:
1469.94' N & 1706.49' W
from the Southwest corner of:

SEC 3 TWP 6-N RGE 5-W

Other Services
DIFL AC GR
CDL-CN-GR

Permanent Datum GL Elev. 1075.10

Log Measured from KB , 11.50 Ft Above Permanent Datum

Drilling Measured from KB

Elev.
KB 1086.60
DF 1085.60
GL 1075.10

Date	11/29/90	12/03/90		
Run No.	1	2		
Service Order	65504	65505		
Depth - Driller	2621.0	2891.0		
Depth - Logger	2613.0	2892.0		
Bottom Logged Interval	2611.0	2890.0		
Top Logged Interval	2000.0	2607.0		
Casing - Driller	17.50 @ 572.0	8.63 @ 2603.0	@	@
Casing - Logger	572.0			
Bit Size	12.250	7.875		
Type Fluid in Hole	GEL	POLYMER		
Density and Viscosity	8.0 | 40.0	8.9 | 37.0		
pH and Fluid Loss	8.5 | 5.8cc	9.0 | 11.2cc	cc	cc
Source of Sample	FLOW	FLOW		
Rm @ Meas. Temp.	3.400 @ 65 F	0.500 @ 50 F	@ F	@ F
Rmf @ Meas. Temp.	2.500 @ 65 F	0.400 @ 50 F	@ F	@ F
Rmc @ Meas. Temp.	4.200 @ 65 F	0.700 @ 50 F	@ F	@ F
Source of Rmf and Rmc	MEAS | MEAS	MEAS | MEAS		
Rm @ BHT	2.100 @ 105 F	0.230 @ 106 F	@ F	@ F
Time Since Circ.	7.00	5.00		
Max. Rec. Temperature	105 F	106 F	F	F
Equip. No. and Location	6399 | BAK	6399 | BAK		
Recorded By:	HINDS	HINDS		
Witnessed By:	MR. ROTH/THOMAS	MR. ROTH/THOMAS		

FINAL PRINT

FOLD HERE

In making interpretations of logs our employees will give Customer the benefit of their best judgment, but since all interpretations are opinions based on inferences from electrical or other measurements, we cannot, and we do not guarantee the accuracy or the correctness of any interpretation. We shall not be liable or responsible for any loss, cost, damages, or expenses whatsoever incurred or sustained by the Customer resulting from any interpretation made by any of our employees.

Remarks:
SEARCH LENGTH 48 INCHES/ WINDOW LENGTH 8 FEET/ STEP LENGTH 2 FEET
RUN 1 - PROCESSED FILE ID 1605 FROM 2000 TO 2607
RUN 2 - PROCESSED FILE ID 1605 FROM 2607 TO 2900

48" search per customers request.

EQUIPMENT DATA

	RUN NO. 1	RUN NO. 2	RUN NO.	RUN NO.
Tool Series No.	52430MA	52430MA		
Tool Serial No.	1016	1016		
Orientation Type				
OR. Serial No.				
Panel Series No.				
Panel Serial No.				
Electronics No.	78403	78403		
Tape Unit Series No.				
Tape Unit Serial No.				
Analyst	JOHNSON	JOHNSON		

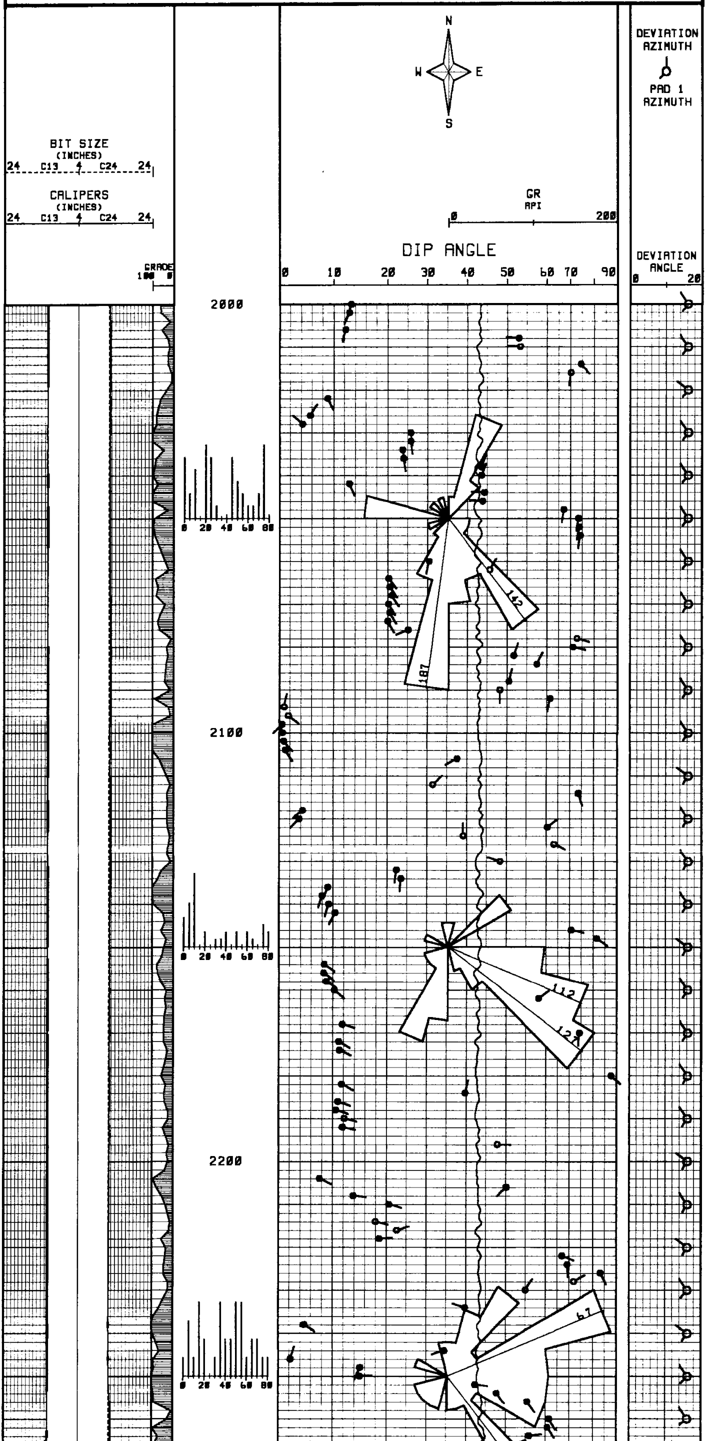
MAGNETIC DECLINATION 20 EAST

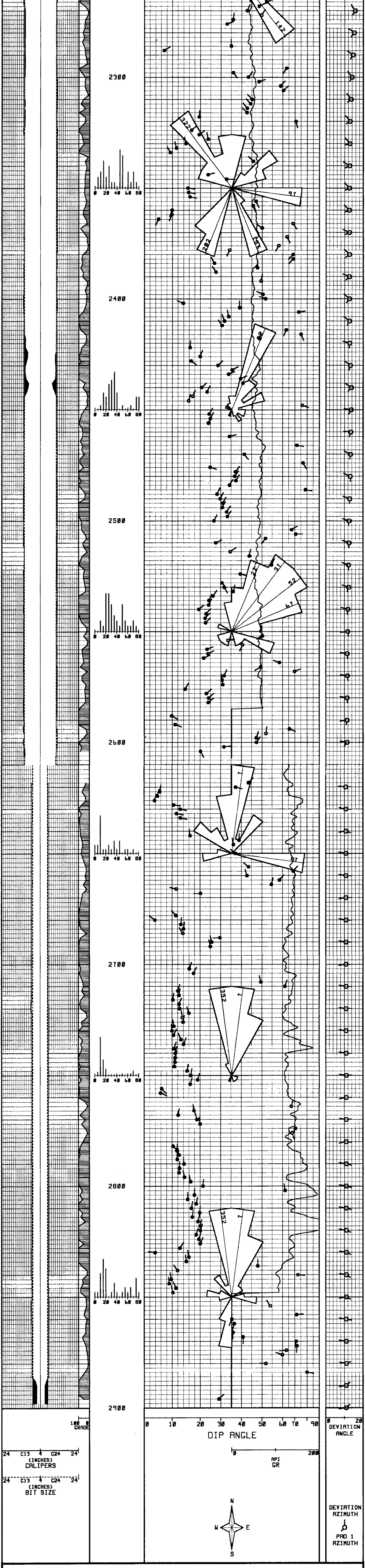
VERTICAL DISPLACEMENT FOR VARIOUS HORIZONTAL DISTANCES AND ANGLES OF DIP

DIP In degrees	100	1000	5280	DIP In degrees	100	1000	5280
1	1.75	17.5	92.2	19	34.4	344	1818
2	3.50	35.0	184.0	20	36.4	364	1922
3	5.20	52.0	277.0	21	38.4	384	2022
4	7.00	70.0	369.0	22	40.4	404	2133
5	8.80	88.0	462.0	23	42.5	425	2241
6	10.50	105.0	555.0	24	44.5	445	2351
7	12.30	123.0	648.0	25	46.6	466	2462
8	14.10	141.0	742.0	30	57.7	577	3048
9	15.80	158.0	836.0	35	70.0	700	3697
10	17.60	176.0	931.0	40	83.9	839	4430
11	19.40	194.0	1026.0	45	100.0	1000	5280
12	21.30	213.0	1112.0	50	119.2	1192	6291
13	23.10	231.0	1219.0	55	142.8	1428	7500
14	24.90	249.0	1316.0	60	173.2	1732	9145
15	26.80	268.0	1415.0	65	214.4	2144	11323
16	28.70	287.0	1514.0	70	274.8	2748	14507
17	30.60	306.0	1614.0	75	373.2	3732	19705
18	32.50	325.0	1716.0	80	567.1	5671	29945

GRAPHIC PRESENTATION

FAIR ○— EXCELLENT ●—





Company	OREGON NATURAL GAS DEVELOPEMENT CORP.	Drillers T.D.	2891.0
Well	IW33AC-3	Log T.D.	2892.0
Field	MIST	Log F.R.	2890.0
County	COLUMBIA	Elevations	
State	OREGON	K.B. 1086.60 DF. 1085.60 G.L. 1075.10	

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ATLAS
WIRELINE
SERVICES