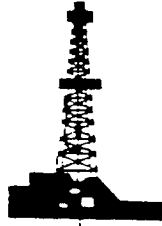


GREAT LAND DIRECTIONAL DRILLING, INC.



REPORT OF SUB-SURFACE DIRECTIONAL SURVEY		
AMOCO	Well File	
COMPANY		
GARTNER GASCOM A#1	G-27-30N-8W	
WELL NAME		
SAN JUAN CO., NEW MEXICO		
LOCATION		
RMC-12-89-D46	MWD	JANUARY 23, 1990
JOB NUMBER	TYPE SURVEY	DATE

THIS IS A RECORD OF A SUB-SURFACE SURVEY
OF YOUR WELL

We have retained a copy of your survey report in our files for your convenience; however, should you so desire, all copies of the survey report will be forwarded to you on written request. All surveys are kept in a locked file and are held in the strictest confidence. Additional copies of your survey report can be made from the original by any blueprint company.

Great Land Directional Drilling



Marker Identification
AJ 83
01 TARGET

FB
0
2210

W/S
00
00

E/W
00 E
221 E

PLAN VIEW

AMOCO PRODUCTION COMPANY

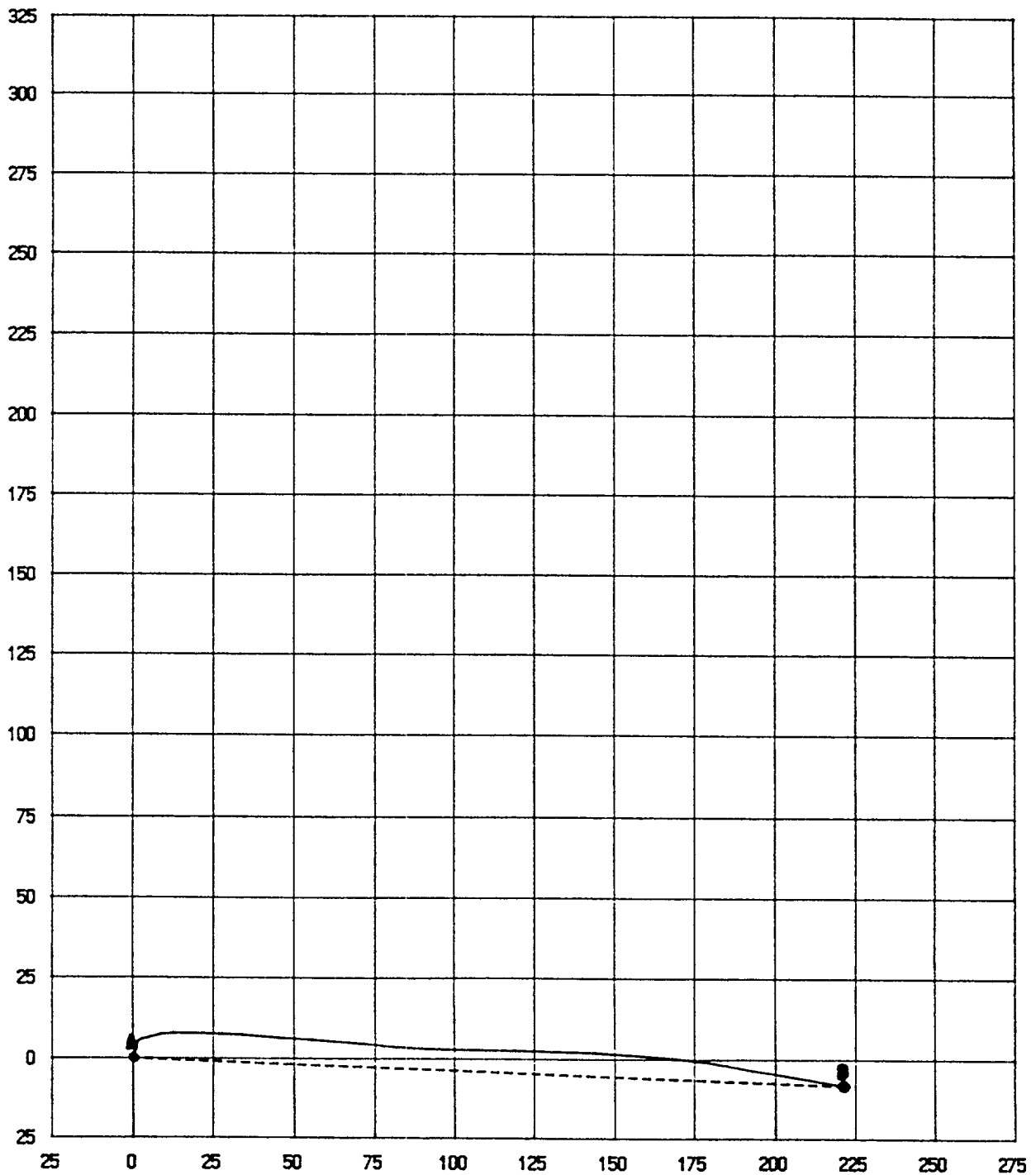
GARTNER GASCOM A-1

CLOSURE.....: 222 ft S 87.80 E

DECLINATION.: 11.00 E

SCALE.....: 1 inch = 50 feet

DRAWN.....: 01/22/90



Great Land Directional Drilling

VERTICAL SECTION

AMOCO PRODUCTION COMPANY

GARTNER GASCOM A-1

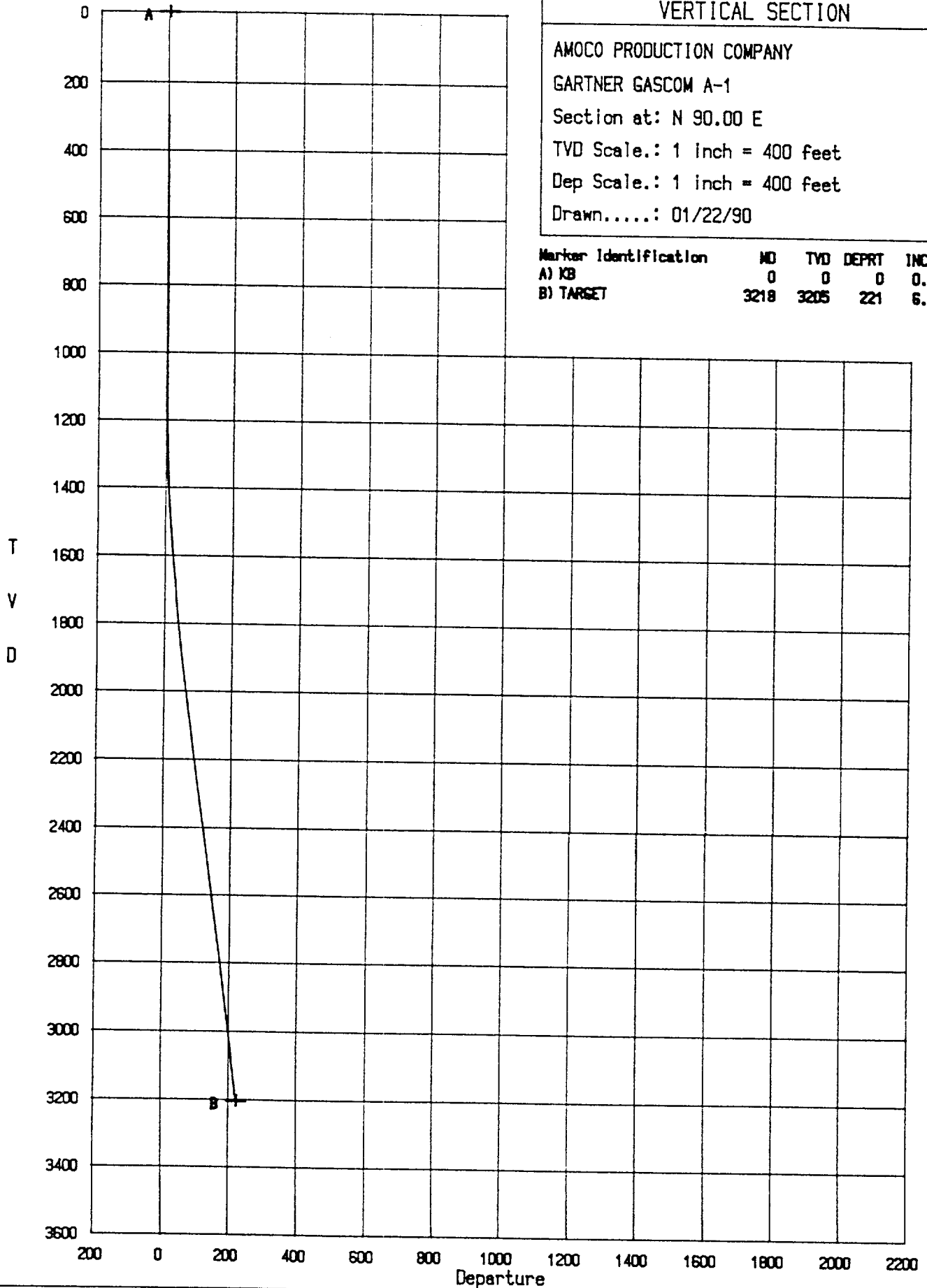
Section at: N 90.00 E

TVD Scale.: 1 inch = 400 feet

Dep Scale.: 1 inch = 400 feet

Drawn.....: 01/22/90

Marker Identification	MD	TVD	DEPRT	INCLN
A) KB	0	0	0	0.00
B) TARGET	3218	3205	221	6.40



Client.....: AMOCO PRODUCTION COMPANY
Field.....: BASIN FRUITLAND
Well.....: GARTNER GASCOM A-1
Location at: N,90.00,E
Mag Decln...: 11.00 E

Computation....: RADIUS OF CURVATURE
Survey Date....: 01/18/90
RKB Elevation..: 6183.00 ft
Case ID.....: BASINA1

RECORD OF SURVEY

S MEAS		INCLN	VERT-DEPTHS		SECT	DIRECTION	REL-COORDINATES		CLOSURE		DL/
C DEPTH		ANGLE	BKB	SUB-S	DIST	BEARING	FROM-WELLHEAD		DIST	BEARING	100
3	300	0.10	300	-5883	0	N 30.94 E	0	N 0 E	0	N 30.94 E	0.0
3	540	0.40	540	-5643	1	N 21.56 E	1	N 1 E	1	N 27.19 E	0.1
3	840	0.30	840	-5343	1	N 9.32 E	3	N 1 E	3	N 20.33 E	0.0
3	1140	0.60	1140	-5043	2	N 18.68 E	5	N 2 E	5	N 17.61 E	0.1
3	1273	0.60	1273	-4910	3	N 88.21 E	6	N 3 E	7	N 24.31 E	0.0
3	1303	1.00	1303	-4880	3	N 84.20 E	6	N 3 E	7	N 27.43 E	1.3
3	1366	3.10	1366	-4817	5	N 69.10 E	7	N 5 E	8	N 39.09 E	3.3
3	1427	3.20	1427	-4756	9	N 79.00 E	7	N 9 E	11	N 48.84 E	0.2
3	1488	4.10	1488	-4695	12	N 89.16 E	8	N 12 E	15	N 57.62 E	1.5
3	1550	4.50	1550	-4633	17	S 88.07 E	8	N 17 E	19	N 65.36 E	0.6
3	1611	5.00	1610	-4573	22	S 88.75 E	8	N 22 E	23	N 70.84 E	0.8
3	1674	4.80	1673	-4510	27	S 88.92 E	8	N 27 E	28	N 74.61 E	0.3
3	1736	4.90	1735	-4448	33	S 85.82 E	7	N 33 E	34	N 77.38 E	0.2
3	1797	5.70	1796	-4387	38	S 85.10 E	7	N 38 E	39	N 79.83 E	1.3
3	1859	6.60	1857	-4326	45	S 86.20 E	6	N 45 E	45	N 81.93 E	1.5
3	1951	7.30	1949	-4234	56	S 86.39 E	6	N 56 E	56	N 84.24 E	0.8
3	2042	7.90	2039	-4144	68	S 85.12 E	5	N 68 E	68	N 86.00 E	0.7
3	2135	7.40	2131	-4052	80	S 84.23 E	4	N 80 E	80	N 87.43 E	0.5
3	2228	7.50	2223	-3960	92	S 89.09 E	3	N 92 E	92	N 88.20 E	0.1
3	2322	8.50	2316	-3867	105	S 89.12 E	3	N 105 E	106	N 88.53 E	1.1
3	2415	8.10	2408	-3775	119	S 89.39 E	3	N 119 E	119	N 88.78 E	0.4
3	2510	7.30	2502	-3681	132	S 89.13 E	2	N 132 E	132	N 88.97 E	0.8
3	2603	7.80	2595	-3588	144	S 86.80 E	2	N 144 E	144	N 89.23 E	0.5
3	2696	8.00	2687	-3496	157	S 85.70 E	1	N 157 E	157	N 89.60 E	0.2
3	2787	7.80	2777	-3406	169	S 86.00 E	0	N 169 E	169	N 89.94 E	0.2
3	2878	7.10	2867	-3316	181	S 79.20 E	1	S 181 E	181	S 89.58 E	0.8
3	2972	7.10	2960	-3223	192	S 79.10 E	4	S 192 E	192	S 88.95 E	0.0
3	3060	7.40	3048	-3135	203	S 82.00 E	5	S 203 E	203	S 88.49 E	0.3
3	3171	6.40	3158	-3025	216	S 79.20 E	8	S 216 E	216	S 88.01 E	0.9
0	3218	6.40	3205	-2978	221	S 79.20 E	8	S 221 E	222	S 87.80 E	0.0

^Survey Codes: 0/UNKNOWN 3/MWD

DATA INTE. PLATED FOR 100 FT SUBSEA 1 PERVAL

SUBSEA DEPTH	MEAS DEPTH	BKB DEPTH	MD-TVD DIFF	VERT CORRECT	RELATIVE COORDINATES FROM WELL HEAD	
=====	=====	=====	=====	=====	=====	=====
-5800	383	383	0	0	0.42 N	0.24 E
-5700	483	483	0	0	0.83 N	0.45 E
-5600	583	583	0	0	1.44 N	0.70 E
-5500	683	683	0	0	2.05 N	0.90 E
-5400	783	783	0	0	2.62 N	1.03 E
-5300	883	883	0	0	3.16 N	1.13 E
-5200	983	983	0	0	3.83 N	1.27 E
-5100	1083	1083	0	0	4.67 N	1.49 E
-5000	1183	1183	0	0	5.60 N	1.88 E
-4900	1283	1283	0	0	5.99 N	2.82 E
-4800	1383	1383	0	0	6.85 N	6.18 E
-4700	1483	1483	0	0	7.85 N	12.05 E
-4600	1584	1583	1	0	7.73 N	19.75 E
-4500	1684	1683	1	0	7.54 N	28.30 E
-4400	1784	1783	1	0	6.98 N	37.08 E
-4300	1885	1883	2	1	6.17 N	47.96 E
-4200	1986	1983	3	1	5.35 N	60.52 E
-4100	2087	2083	4	1	4.23 N	74.07 E
-4000	2187	2183	4	1	3.08 N	87.14 E
-3900	2288	2283	5	1	2.78 N	100.63 E
-3800	2389	2383	6	1	2.57 N	115.29 E
-3700	2490	2483	7	1	2.41 N	129.13 E
-3600	2591	2583	8	1	2.04 N	142.27 E
-3500	2692	2683	9	1	1.15 N	156.09 E
-3400	2793	2783	10	1	0.14 N	169.92 E
-3300	2894	2883	11	1	1.70 S	182.72 E
-3200	2995	2983	12	1	4.04 S	194.97 E
-3100	3096	3083	13	1	5.98 S	207.58 E
-3000	3196	3183	13	1	8.04 S	219.06 E

DATA INTERPOL. ED FOR 1000 FT MEASURED DL TH INTERVAL

=====	=====	=====	=====	
MEAS	BKB	SUBSEA	RELATIVE COORDINATES	
DEPTH	DEPTH	DEPTH	FROM WELL HEAD	
=====	=====	=====	=====	=====
1000	1000	-5183	3.96 N	1.30 E
2000	1997	-4186	5.21 N	62.40 E
3000	2988	-3195	4.15 S	195.61 E