

REPORT
and
PLAN
of
SUB-SURFACE

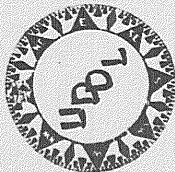
SURVEY

AMERADA PETROLEUM
CORPORATION

AMERADA ET AL
CROWN Y.T. "A"
NO. 1

Date OCTOBER 1960

UNITED DIRECTIONAL DRILLING LTD.

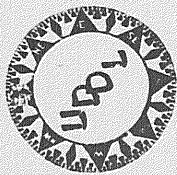


RECORD OF MAGNETIC SURVEY

AMERADA PETROLEUM CORPORATION
 AMERADA et al CROWN YT 'A' #1

DATE October 1960.

	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES				REMARKS DOG LEGS	
						NORTH	SOUTH	EAST	WEST		
1	1350.00		ASSUMED								
2	1450.00	3° 30'	1449.81	6.10	N 18 W	5.80			1.88		0° 31'
3	1500.00	4° 00'	1499.69	3.49	N 16 W	9.15			2.84		0° 36'
4	1550.00	4° 10'	1549.56	3.63	N 24 W	12.47			4.12		1° 09'
5	1600.00	4° 25'	1599.41	3.85	N 39 W	15.09			6.43		
6	1650.00	4° 40'	1649.25	4.07	N 21 W	18.89			7.89		1° 27'
7	1700.00	4° 35'	1699.09	3.99	N 32 W	22.27			10.00		0° 53'
8	1750.00	5° 00'	1748.90	4.36	N 32 W	25.97			12.31		0° 25'
9	1800.00	5° 05'	1798.71	4.43	N 44 W	29.16			15.39		1° 03'
10	1850.00	5° 10'	1848.51	4.50	N 37 W	32.73			18.10		0° 38'
11	1900.00	5° 30'	1898.28	4.79	N 50 W	35.81			21.77		1° 15'
12	1950.00	5° 45'	1948.03	5.01	N 62 W	38.16			26.19		1° 12'
13	2000.00	5° 40'	1997.78	4.93	N 63 W	40.40			30.58		0° 08'
14	2050.00	6° 10'	2047.49	5.37	N 78 W	41.52			35.83		1° 37'
15	2100.00	6° 50'	2097.14	5.95	N 78 W	42.76			41.63		0° 40'
16	2150.00	7° 05'	2146.76	6.16	N 81 W	43.72			47.71		0° 26'
17	2200.00	7° 10'	2196.37	6.24	WEST	43.72			53.95		1° 07'
18	2250.00	7° 50'	2245.91	6.81	N 86 W	44.20			60.76		0° 58'
19	2300.00	8° 20'	2295.38	7.24	N 78 W	42.69			67.84		2° 18'
20	2350.00	8° 50'	2344.89	7.68	N 81 W	41.49			75.33		0° 40'
21	2400.00	8° 55'	2394.29	7.75	N 80 W	40.14			82.96		0° 10'
22	2450.00	8° 45'	2444.80	7.60	N 79 W	38.69			90.42		0° 14'
23	2500.00	8° 55'	2493.20	7.75	N 83 W	40.07			98.12		2° 46'
24	2550.00	9° 00'	2542.59	7.82	N 80 W	41.43			105.82		0° 29'
25	2600.00	8° 50'	2592.00	7.68	N 80 W	42.76			113.39		0° 10'



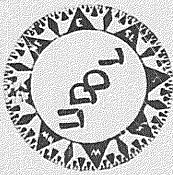
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AMERADA et al CRWON YT 'A' # 1

DATE October 1960.

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						NORTH	SOUTH	EAST	WEST	
26	2650.00	8° 45'	2641.41	7.60	S 80	41.44			120.89	0° 20'
27	2700.00	8° 25'	2690.87	7.32	S 85	40.80			128.18	0° 49'
28	2750.00	8° 20'	2740.34	7.25	S 85	40.17			135.40	0° 05'
29	2839.00	9° 10'	2828.20	14.18	S 89	39.92			149.58	1° 02'
30	2884.00	8° 40'	2872.69	6.78	N 89	40.04			156.36	0° 35'
31	2916.00	8° 30'	2904.34	4.73	N 84	40.53			161.06	0° 46'
32	2970.00	8° 00'	2957.82	7.52	S 89	40.40			168.58	1° 07'
33	3034.00	8° 00'	3021.20	8.91	N 81	41.79			177.38	1° 14'
34	3081.00	8° 00'	3067.74	6.54	S 89	41.68			183.92	1° 24'
35	3150.00	8° 40'	3135.95	10.40	N 85	42.59			194.28	1° 06'
36	3209.00	9° 30'	3194.14	9.74	N 86	43.27			204.00	0° 51'
37	3291.00	12° 30'	3274.20	17.74	S 79	39.89			221.41	4° 08'
38	3431.00	14° 15'	3409.89	34.47	N 89	40.49			255.87	3° 17'
39	3506.00	14° 15'	3482.58	18.47	S 77	36.33			273.87	3° 28'
40	3611.00	14° 15'	3583.61	25.85	S 76	30.08			298.95	0° 15'
41	3668.00	14° 00'	3638.92	13.79	N 76	33.42			312.23	6° 50'
42	3723.00	14° 30'	3692.17	13.77	S 86	32.46			326.07	4° 29'
43	3773.00	15° 45'	3740.30	13.57	N 88	32.93			339.63	2° 01'
44	3796.00	16° 50'	3762.40	6.37	N 87	33.26			345.99	0° 26'
45	3812.00	17° 00'	3777.70	4.68	N 85	33.67			350.65	1° 05'
46	3824.00	16° 35'	3789.20	3.42	N 84	34.03			354.05	0° 30'
47	3904.00	16° 15'	3866.00	22.38	S 85	32.08			376.34	3° 10'
48	3977.00	16° 30'	3935.99	20.73	N 78	38.49			396.06	6° 32'
49	4079.00	18° 00'	4033.00	31.52	N 78	45.04			426.89	6° 21'
50	4114.00	17° 30'	4066.38	10.52	WEST	45.04			437.41	3° 45'



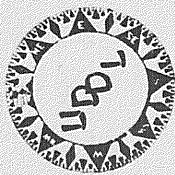
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						NORTH	SOUTH	EAST		WEST
51	4136.00	17° 30'	4087.36	6.61	N 83	45.85			443.97	2° 08'
52	4164.00	17° 00'	4114.14	8.19	N 88	46.14			452.16	1° 35'
53	4191.00	16° 35'	4140.02	7.71	N 88	49.03			459.31	5° 51'
54	4264.00	17° 15'	4209.74	21.64	N 69	56.79			479.51	0° 44'
55	4281.00	15° 45'	4226.10	4.61	S 84	56.31			484.09	7° 50'
56	4333.00	16° 00'	4276.09	14.33	W 76	59.78			497.99	5° 31'
57	4373.00	16° 50'	4314.38	11.58	W 79	61.99			509.36	1° 12'
58	4494.00	16° 30'	4430.39	34.36	N 89	62.57			543.71	1° 55'
59	4594.00	15° 00'	4526.98	25.88	W 87	63.94			569.55	1° 36'
60	4728.00	12° 45'	4657.67	29.57	W 64	76.90			596.13	5° 56'
61	4818.00	12° 00'	4745.70	18.71	W 69	83.61			613.60	1° 19'
62	4996.00	10° 45'	4920.59	33.20	W 71	94.42			644.99	1° 18'
63	5102.00	10° 50'	5024.70	19.93	S 89	94.07			664.92	3° 45'
64	5157.00	10° 15'	5078.82	9.78	S 78	92.04			674.49	2° 06'
65	5234.00	10° 15'	5154.59	14.70	S 84	90.61			688.11	1° 04'
66	5363.00	13° 00'	5280.29	29.29	W 74	98.61			716.02	5° 12'
67	5463.00	15° 45'	5376.54	27.14	S 59	84.63			739.28	11° 44'
68	5576.00	17° 00'	5484.60	33.04	N 81	89.80			771.91	11° 16'
69	5614.00	17° 00'	5520.94	11.81	N 81	91.54			782.88	0° 00'
70	5708.00	18° 00'	5610.34	29.05	S 84	88.50			811.77	4° 20'
71	5808.00	19° 00'	5704.89	32.56	W 54	69.38			838.11	9° 37'
72	5922.00	21° 00'	5811.32	40.86	S 64	51.45			874.84	4° 01'
73	6025.00	23° 00'	5906.13	40.24	S 69	37.03			912.41	2° 46'
74	6126.00	25° 00'	5997.67	42.68	S 59	15.05			949.00	4° 38'
75	6180.00	26° 00'	6046.21	23.67	S 69	6.57			971.10	4° 33'



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						NORTH	SOUTH	EAST	WEST		
76	6222.00	25° 45'	6084.04	18.25	S 84	4.66			989.25	6° 46'	
77	6320.00	26° 15'	6171.94	43.35	S 69		10.88		1027.78	6° 48'	
78	6339.00	27° 00'	6188.87	8.63	S 64		14.66		1037.48	2° 27'	
79	6403.00	24° 45'	6246.99	26.80	S 74		22.05		1063.24	5° 04'	
80	6467.00	24° 15'	6305.35	26.29	S 82		25.71		1089.27	3° 37'	
81	6532.00	24° 00'	6364.73	26.44	S 74		33.00		1114.69	0° 22'	
82	6616.00	23° 00'	6442.05	32.82	S 79		39.26		1146.91	2° 17'	
83	6737.00	22° 15'	6554.04	45.81	S 81		46.42		1192.16	2° 05'	
84	6835.00	20° 30'	6645.84	34.32	S 84		50.01		1226.29	2° 05'	
85	6930.00	20° 15'	6734.97	32.88	S 84		53.45		1258.99	0° 15'	
86	7014.00	21° 00'	6813.39	30.11	S 59		68.96		1284.80	8° 58'	
87	7105.00	18° 00'	6899.94	28.12	S 61		82.59		1309.39	3° 05'	
88	7189.00	21° 30'	6978.09	30.79	S 81		87.41		1339.80	7° 41'	
89	7261.00	20° 30'	7045.53	25.21	S 56		101.51		1360.70	9° 09'	
90	7356.00	19° 30'	7135.08	31.71	S 74		110.25		1391.18	6° 19'	
91	7438.00	15° 30'	7214.10	21.91	S 66		119.16		1411.20	4° 41'	
92	7523.00	14° 30'	7296.39	21.28	S 61		129.48		1429.84	1° 39'	
CLOSURE = (1435566 ft. South 84° 50' West)											

VII.

AMERADA ET AL CROWN YT-A #1

TESTING DETAILS

No tests were run.

VIII.

AMERADA ET AL CROWN YT-A #1

FISHING DETAILS AND STUCK PIPE

Fishing Job #1

Drilled 7 7/8" hole to 828' twisted off.
Left in hole 7 7/8" bit, bit sub, and 3 drill collars. Recovered fish with Bowen overshot. Tool joint on collar twisted off.

Fishing Job #2

Drilled 8 5/8" hole to 874' twisted off.
Left in hole 8 5/8" bit, bit sub, and 12 drill collars. Recovered fish with Bowen overshot. 4 1/2" drill pipe twisted off 1' above drill collars.

Fishing Job #3

Drilled 8 5/8" hole to 856' twisted off. Left in hole bit and bit sub and 1 drill collar. Recovered fish with Bowen overshot. Drill collar tool joint has all threads stripped off.

Fishing Job #4

Drilled 8 5/8" hole to 859' twisted off.
Left in hole bit and bit sub and 2 drill collars. Recovered fish with Bowen overshot. String parted in tool joint.

Fishing Job #5

Reaming 12 1/4" hole to 17 1/2" at 809' twisted off. Left in hole reamer, sub and 7 drill collars. Recovered fish with Bowen overshot using a 15" guide on overshot. Drill collars wobbled off in tool joint. 1 cone missing off reamer.

Fishing Job #6

Reaming 12 1/4" hole to 17 1/2" at 1000' twisted off. Left in hole reamer, sub and 1 drill collar. Recovered fish with Bowen overshot. Drill collars wobbled off in tool joint.

Fishing Job #7

Reaming 12 1/4" hole to 17 1/2" at 1160'. Left in hole reamer, sub and 3 drill collars. Recovered fish with Bowen overshot. Drill collars wobbled off in tool joint.

Fishing Job #8

Located reamer cone at 1160'. Ran 12 1/4" bit and cleaned out to 1160'. Made a basket out of 10 3/4" casing and ran in 2 times. No recovery. Ran 8 5/8" bit and cleaned out from 1160 - 1175'. Ran basket. No recovery. Reran basket and recovered 5 large rocks. Ran 12 1/4" bit and cleaned out to bottom. Made 2 more trips with basket. No recovery. Ran 17 1/2" reamer and reamed from 1160' to 1180'. Milled on iron at 1180'. Pulled out reamer and ran in with 12 1/4" bit and milled on iron. Ran poor boy basket. No recovery. Ran 12 1/4" bit with 1 cone cut off to centre fish. Ran impression block, impressions not too good. Ran 10" guide on overshot with bent single to centre junk. Ran in

AMERADA ET AL CROWN YT-A #1

FISHING DETAILS AND STUCK PIPE

with Hollier basket mill and milled on iron for 4 hours. Ran in with poor boy basket. No recovery. Ran Bowen magnet and recovered bearings and small pieces of junk. Reran magnet and recovered a few small pieces of iron. Ran 8 5/8" bit and made 6" new hole. Reran magnet and recovered a few small pieces of iron. Ran in with 17 1/2" reamer and reamed hole from 1180' to 1197'. Pulled reamer and made 3 trips with side door basket. Recovered few small pieces of iron. Ran in 7 7/8" Hollier basket with Klustrite head and milled on iron for 22 hrs. Pulled out and found cone and pin wedged in basket. Made 1 run with magnet. No recovery. Ran side door basket. No recovery. Ran Hollier basket and milled 6 1/2 hrs. Ran basket. No recovery. Made new 8 5/8" basket. Ran and recovered cone shank. Ran small magnet. No recovery. Ran 10" magnet. No recovery.

Fishing Job No. 9

Drilled 8 5/8" hole to 1464' twisted off. Left in hole bit, bit sub and 3 drill collars and cushion stabilizer. Ran in Bowen overshot and brought out 3 drill collars and stabilizer, and found that collars were also parted above bit sub. Ran in Bowen overshot and recovered bit and bit sub. Both twisted off 2' above shoulder pin.

Fishing Job #10

Drilled 8 5/8" hole to 1753' twisted off. Left in hole bit, bit sub, stabilizer reamer, cushion stabilizer. Made 2 runs with Bowen overshot to recover fish. Pin was broken off drill collar.

Fishing Job #11

Drilled to 4164'. Pulled out and left 2 cones in hole. Made 2 runs with magnet and recovered 1 cone each trip. Ran in with junk basket and recovered bearings.

Fishing Job #12

Started to pull directional survey. 3" girt under crown holding sheave broke and sand line was cut on rig braco. Rigged up hair pin grab and ran on drill pipe to 1000'. Rotated 5 turns and had line. Pulled out and recovered all sand line and instrument.

Stuck Pipe at 242' - 2 hrs., 5178' 3/4 hr., 2620' 2 1/2 hrs., 6754' Diamond bit. 7975' 4 1/2 hrs. Freed pipe by working string. 4 1/2" drill pipe and 6 1/4" O.D. drill collars with roll Flex connections were used.