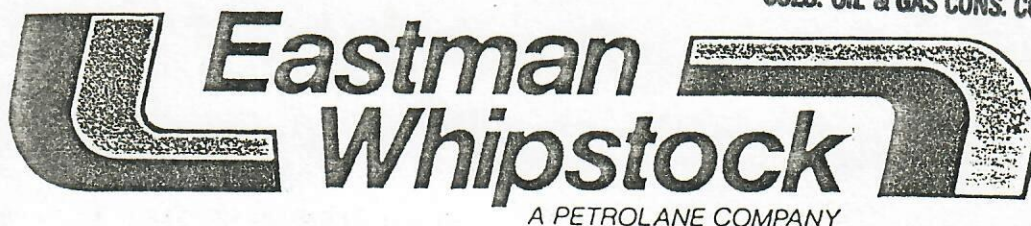


CONFIDENTIAL

RECEIVED

OCT 10 1986

COLD. OIL & GAS CONS. COMM



**REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY**

EDWIN L. & BERRY R. COX
COMPANY

COX TOW CREEK STATE 1-36
WELL NAME

ROUTT COUNTY, COLORADO
LOCATION

JOB NUMBER

RM985 M1747

TYPE OF SURVEY

COMPLETION REPORT

DATE

21-NOV-85

SURVEY BY

OFFICE
RM 410

EASTMAN WHIPSTOCK, INC.

RECORD OF SURVEY

FOR

*
* OPERATOR : EDWIN L. & BERRY R. COX *
*
* WELL NAME : COX TOW CREEK STATE 1-36 *
*
* LOCATION : ROUTT COUNTY, COLORADO *
*
* JOB NUMBER : RM987 M1747 *
*
* RIG : KELLY #5 *
*
* DECLINATION : 15.00 E *
*
*
* PLANE OF VERTICAL SECTION *
*
*
* DIRECTION : N 41 32 W *
*
*

EM DISTRICT : ROCKY MOUNTAIN DIST.

COAL OIL & GAS CONS. COM.

OCT 10 1986

RECEIVED

CONFIDENTIAL



EDWIN L. & BERRY R. COX
COX TOW CREEK STATE 1-36
ROUTT COUNTY, COLORADO

PBHL : N 41 32 W

DATE PRINTED : 21-NOV-85
OUR REF. NO. : S01674.0CZ
JOB NUMBER :

PAGE NO. 2

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	VERTICAL SECTION	R E C T A N G U L A R C O O R D I N A T E S		DOGLEG SEVERITY
0.00	0 0	N 0 0 E	0.00	0.00	0.00	0.00 N	0.00 E	0.00
165.00	0 15	N 60 0 E	165.00	165.00	-0.07	0.18 N	0.31 E	0.15
227.00	0 30	N 60 0 E	62.00	227.00	-0.15	0.38 N	0.66 E	0.40
312.00	0 30	N 60 0 E	85.00	311.99	-0.30	0.75 N	1.30 E	0.00
511.00	0 30	N 33 0 W	199.00	510.99	0.59	2.26 N	1.67 E	0.36
608.00	0 30	N 37 0 W	97.00	607.98	1.43	2.96 N	1.18 E	0.00
640.00	0 30	N 65 0 W	32.00	639.98	1.70	3.13 N	0.97 E	0.76
727.00	0 45	N 61 0 W	87.00	726.98	2.58	3.56 N	0.12 E	0.29
789.00	1 15	N 63 0 W	62.00	788.97	3.60	4.07 N	0.83 W	0.81
888.00	1 15	N 86 0 W	99.00	887.94	5.40	4.64 N	2.90 W	0.50
1025.00	2 30	N 81 0 W	137.00	1024.87	8.73	5.15 N	7.35 W	0.92
1113.00	2 45	N 87 0 W	88.00	1112.78	11.70	5.57 N	11.36 W	0.42
1178.00	2 45	N 78 0 W	65.00	1177.70	14.05	5.98 N	14.45 W	0.66
1241.00	3 15	N 62 0 W	63.00	1240.61	16.94	7.10 N	17.54 W	1.54
1305.00	3 30	N 67 0 W	64.00	1304.50	20.41	8.72 N	20.94 W	0.60
1453.00	4 15	N 70 0 W	148.00	1452.16	29.32	12.39 N	30.24 W	0.52
1549.00	6 0	N 60 0 W	96.00	1547.78	37.18	16.01 N	38.00 W	2.04
1652.00	6 30	N 54 0 W	103.00	1650.16	47.98	22.11 N	47.40 W	0.80
1747.00	7 0	N 50 0 W	95.00	1744.50	58.96	28.98 N	56.20 W	0.72
1875.00	7 30	N 52 0 W	128.00	1871.48	74.89	39.15 N	68.75 W	0.44
1959.00	8 30	N 57 0 W	84.00	1954.66	86.28	45.94 N	78.27 W	1.45
2099.00	7 30	N 47 0 W	140.00	2093.30	105.42	57.92 N	93.60 W	1.22
2147.00	7 30	N 47 0 W	48.00	2140.89	111.65	62.19 N	98.18 W	0.00
2315.00	8 30	N 53 0 W	168.00	2307.25	134.77	77.21 N	116.08 W	0.77
2442.00	11 30	N 55 0 W	127.00	2432.31	156.30	90.17 N	133.92 W	2.38
2640.00	12 45	N 54 0 W	198.00	2625.89	196.82	114.32 N	167.78 W	0.64
2727.00	13 0	N 65 0 W	87.00	2710.70	215.24	124.14 N	184.46 W	2.83
2833.00	15 0	N 70 0 W	106.00	2813.54	238.28	133.95 N	208.14 W	2.20
2889.00	16 30	N 71 0 W	56.00	2867.44	251.38	139.03 N	222.47 W	2.72
2983.00	16 0	N 70 0 W	94.00	2957.69	274.60	147.81 N	247.26 W	0.61

CONTINUED ON NEXT PAGE ...



CONFIDENTIAL

EDWIN L. & BERRY R. COX
COX TOW CREEK STATE 1-36
ROUTT COUNTY, COLORADO

PBHL : N 41 32 W

DATE PRINTED : 21-NOV-85
OUR REF. NO. : S01674.0CZ
JOB NUMBER :

PAGE NO. 3

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	VERTICAL SECTION	RECTANGULAR COORDINATES	DOGLEG SEVERITY
3086.00	16 15	N 69 0 W	103.00	3056.63	299.86	157.83 N 274.06 W	0.36
3181.00	17 0	N 70 0 W	95.00	3147.66	323.87	167.35 N 299.52 W	0.84
3227.00	17 30	N 69 0 W	46.00	3191.59	335.91	172.12 N 312.29 W	1.26
3258.00	18 15	N 66 0 W	31.00	3221.10	344.47	175.76 N 321.08 W	3.83
3292.00	19 30	N 64 0 W	34.00	3253.27	354.56	180.41 N 331.05 W	4.14
3323.00	20 0	N 61 0 W	31.00	3282.44	364.34	185.25 N 340.34 W	3.60
3355.00	20 0	N 58 0 W	32.00	3312.51	374.75	190.80 N 349.77 W	3.21
3388.00	20 15	N 55 0 W	33.00	3343.50	385.71	197.07 N 359.24 W	3.22
3420.00	20 30	N 53 0 W	32.00	3373.50	396.59	203.62 N 368.25 W	2.31
3482.00	20 0	N 56 0 W	62.00	3431.66	417.50	216.08 N 385.72 W	1.86
3514.00	20 30	N 54 0 W	32.00	3461.69	428.27	222.43 N 394.79 W	2.67
3545.00	21 0	N 52 0 W	31.00	3490.67	439.04	229.04 N 403.56 W	2.80
3577.00	22 0	N 51 0 W	32.00	3520.45	450.59	236.34 N 412.74 W	3.33
3603.00	22 0	N 48 0 W	26.00	3544.55	460.23	242.66 N 420.15 W	4.32
3642.00	22 0	N 47 0 W	39.00	3580.71	474.76	252.53 N 430.92 W	0.96
3665.00	21 30	N 44 0 W	23.00	3602.08	483.26	258.51 N 437.00 W	5.30
3696.00	21 30	N 42 0 W	31.00	3630.92	494.62	266.82 N 444.74 W	2.36
3726.00	20 30	N 41 0 W	30.00	3658.93	505.37	274.87 N 451.87 W	3.54
3759.00	20 30	N 41 0 W	33.00	3689.84	516.93	283.59 N 459.45 W	0.00
3790.00	21 0	N 41 0 W	31.00	3718.83	527.91	291.88 N 466.65 W	1.61
3822.00	20 15	N 40 0 W	32.00	3748.77	539.18	300.45 N 473.97 W	2.59
3854.00	19 45	N 39 0 W	32.00	3778.84	550.12	308.89 N 480.94 W	1.89
3886.00	19 30	N 38 0 W	32.00	3808.99	560.85	317.31 N 487.63 W	1.31
3925.00	20 0	N 38 0 W	39.00	3845.69	574.00	327.69 N 495.74 W	1.28
3958.00	19 15	N 37 0 W	33.00	3876.77	585.06	336.48 N 502.49 W	2.49
3991.00	18 45	N 36 0 W	33.00	3907.98	595.76	345.12 N 508.88 W	1.81
4020.00	18 0	N 33 0 W	29.00	3935.50	604.83	352.65 N 514.06 W	4.16
4051.00	18 0	N 31 0 W	31.00	3964.98	614.28	360.78 N 519.13 W	1.99
4084.00	19 0	N 32 0 W	33.00	3996.27	624.59	369.70 N 524.60 W	3.18
4116.00	19 15	N 31 0 W	32.00	4026.51	634.91	378.64 N 530.08 W	1.29

CONTINUED ON NEXT PAGE ...



CONFIDENTIAL

EDWIN L. & BERRY R. COX
COX TOW CREEK STATE 1-36
ROUTT COUNTY, COLORADO

FBHL : N 41 32 W

DATE PRINTED : 21-NOV-85
OUR REF. NO. : S01674.0CZ
JOB NUMBER :

PAGE NO. 4

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	VERTICAL SECTION	R E C T A N G U L A R C O O R D I N A T E S		DOGLEG SEVERITY
4132.00	19 0	N 31 0 W	16.00	4041.63	640.07	383.14 N	532.78 W	1.56
4147.00	17 30	N 29 0 W	15.00	4055.87	644.67	387.20 N	535.13 W	10.84
4179.00	17 0	N 27 0 W	32.00	4086.43	653.89	395.58 N	539.58 W	2.42
4210.00	17 45	N 29 0 W	31.00	4116.02	662.89	403.76 N	543.93 W	3.09
4243.00	17 0	N 30 0 W	33.00	4147.51	672.53	412.33 N	548.78 W	2.45
4275.00	16 45	N 29 0 W	32.00	4178.13	681.62	420.42 N	553.36 W	1.20
4307.00	17 0	N 29 0 W	32.00	4208.75	690.69	428.54 N	557.86 W	0.78
4338.00	17 0	N 28 0 W	31.00	4238.40	699.52	436.51 N	562.18 W	0.94
4368.00	16 0	N 27 0 W	30.00	4267.16	707.78	444.06 N	566.12 W	3.47
4401.00	15 45	N 25 0 W	33.00	4298.91	716.48	452.18 N	570.08 W	1.82
4431.00	16 0	N 25 0 W	30.00	4327.76	724.35	459.62 N	573.54 W	0.83
4462.00	15 0	N 26 0 W	31.00	4357.63	732.31	467.09 N	577.11 W	3.34
4493.00	14 45	N 29 0 W	31.00	4387.59	740.03	474.15 N	580.78 W	2.61
4526.00	14 30	N 30 0 W	33.00	4419.52	748.18	481.40 N	584.89 W	1.08
4558.00	14 15	N 31 0 W	32.00	4450.52	755.97	488.25 N	588.92 W	1.10
4652.00	13 45	N 34 0 W	94.00	4541.73	778.43	507.42 N	601.14 W	0.94
4696.00	14 30	N 37 0 W	44.00	4584.40	789.11	516.17 N	607.37 W	2.38
4724.00	14 30	N 40 0 W	28.00	4611.51	796.11	521.65 N	611.73 W	2.68
4854.00	15 15	N 49 0 W	130.00	4737.15	829.40	545.43 N	635.10 W	1.87
4984.00	17 30	N 52 0 W	130.00	4861.87	865.60	568.74 N	663.38 W	1.85
5133.00	22 0	N 62 0 W	149.00	5002.07	914.05	596.12 N	705.54 W	3.77
5235.00	25 0	N 65 0 W	102.00	5095.60	951.76	614.26 N	741.93 W	3.17
5328.00	28 0	N 65 0 W	93.00	5178.82	989.82	631.80 N	779.53 W	3.23
5420.00	31 0	N 65 0 W	92.00	5258.88	1031.37	650.94 N	820.59 W	3.26
5573.00	35 30	N 69 0 W	153.00	5386.80	1107.07	683.70 N	897.77 W	3.27
5666.00	38 30	N 69 0 W	93.00	5461.06	1156.73	703.76 N	950.02 W	3.23
5729.00	39 30	N 69 0 W	63.00	5510.02	1191.90	717.97 N	987.03 W	1.59
5789.00	40 30	N 69 0 W	60.00	5555.99	1226.12	731.79 N	1023.04 W	1.67
5881.00	41 0	N 66 0 W	92.00	5625.68	1280.11	754.77 N	1078.51 W	2.20
5978.00	41 0	N 69 0 W	97.00	5698.89	1337.32	779.12 N	1137.30 W	2.03

CONTINUED ON NEXT PAGE ...



CONFIDENTIAL

EDWIN L. & BERRY R. COX
COX TOW CREEK STATE 1-36
ROUTT COUNTY, COLORADO

FBHL : N 41 32 W

DATE PRINTED : 21-NOV-85
OUR REF. NO. : S01674.0CZ
JOB NUMBER :

PAGE NO. 5

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	VERTICAL SECTION	R E C T A N G U L A R C O O R D I N A T E S	DOGLEG SEVERITY
6035.00	41 30	N 71 0 W	57.00	5741.74	1370.35	791.97 N 1172.62 W	2.47

CLOSURE - DISTANCE : 1415.01
DIRECTION : N 55 58 W

REPORT UNITS : Feet
SURVEY CALCULATION METHOD : Radius of curvature

SURVEY RUN INFORMATION

=====

SINGLE SHOTS: / 01-OCT-85 / RM985 M1747

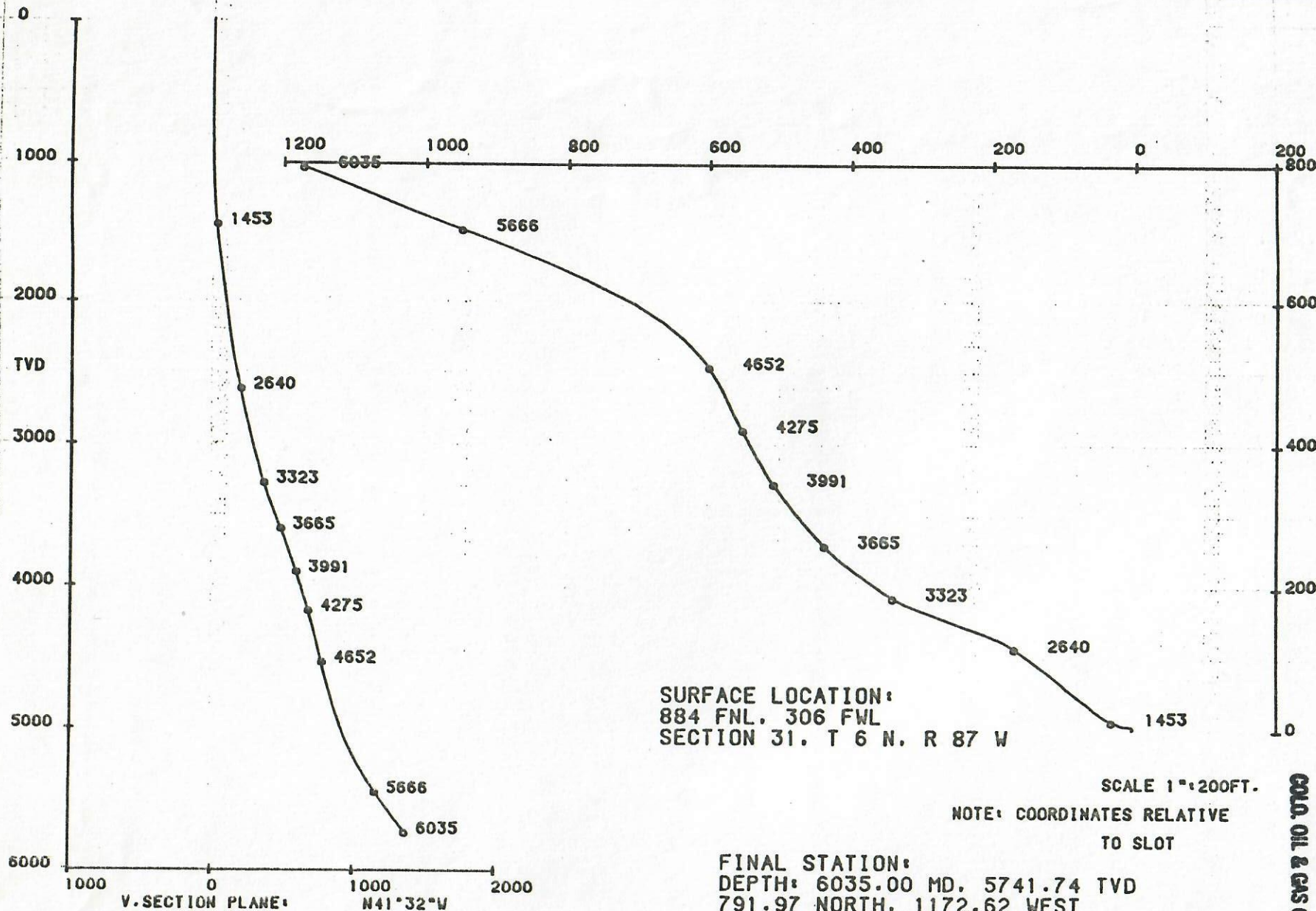
COLO. OIL & GAS CONS. COM. /

OCT 10 1986

RECEIVED

CONFIDENTIAL





SURFACE LOCATION:
884 FNL, 306 FWL
SECTION 31, T 6 N, R 87 W

SCALE 1"=200FT.
NOTE: COORDINATES RELATIVE
TO SLOT

FINAL STATION:
DEPTH: 6035.00 MD, 5741.74 TVD
791.97 NORTH, 1172.62 WEST
CLOSURE: 1415.01 AT N 55 58 W
92.03 FNL, 866.62 FEL
SECTION 36, T 6 N, R 87 W

COLORADO OIL & GAS COMMISSION

OCT 10 1986

RECEIVED

CONFIDENTIAL

EDWIN L. & BERRY R. COX
COX TOW CREEK STATE 1-36
ROUTT COUNTY, COLORADO

WELL: TOW CR ST 1-36

SLOT: 1