

BEFORE THE INDUSTRIAL COMMISSION
OF THE STATE OF NORTH DAKOTA

IN THE MATTER OF A HEARING CALLED ON A MOTION OF
THE COMMISSION TO CONSIDER THE APPLICATION OF
CONTINENTAL OIL COMPANY FOR AN ORDER TO PERMIT
THE DEVIATION OF THE WELL BORE OF THE DICKINSON
UNIT WELL NO. 60 LOCATED IN SECTION 2, TOWNSHIP
139 NORTH, RANGE 97 WEST, STARK COUNTY, NORTH
DAKOTA.

CASE NO. 1550
ORDER NO. 1687

ORDER OF THE COMMISSION

BY THE COMMISSION:

Pursuant to legal notice, this cause came on for hearing at 1:30 p.m. on the 1st day of May, 1978, in Bismarck, North Dakota, before Wesley D. Norton, Trial Examiner appointed for the purpose by the Industrial Commission of North Dakota, hereinafter referred to as the "Commission."

NOW, on this 3rd day of May, 1978, the Commission, a quorum being present, having considered the testimony adduced and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

- (1) That the Commission has proceeded according to law in the exercise of its jurisdiction of this case and the subject matter thereof.
- (2) That the applicant has drilled the Dickinson Unit Well No. 60, located in the SE/4 of the NE/4 of Section 2, Township 139 North, Range 97 West, Stark County, North Dakota, to total depth and at that bottom hole location said well would not produce oil in economic quantity.
- (3) That the applicant requested permission to plug back up the hole and directionally drill to a bottom hole location of 1100 feet from the east line and 760 feet from the north line of Section 2, Township 139 North, Range 97 West, Stark County, North Dakota.
- (4) That all acreage is within the boundary of the Dickinson Heath Unit, Stark County, North Dakota.

IT IS THEREFORE ORDERED:

- (1) That Continental Oil Company be, and is hereby permitted to deviate the well bore of the Dickinson Unit Well No. 60, located in Section 2, Township 139 North, Range 97 West, Stark County, North Dakota, and complete in the Heath Pool at a point approximately 1100 feet from the east line and 760 feet from the north line of said Section 2.

(2) That the applicant shall run a directional survey of said well and submit the results to the State Geologist.

(3) That correlative rights are protected because all acreage involved is within the Dickinson Heath Unit.

(4) That this order shall remain in full force and effect until further order of the Commission.

DONE, in Bismarck, North Dakota, this 3rd day of May, 1978.

THE NORTH DAKOTA INDUSTRIAL COMMISSION



Arthur A. Link, Governor



Allen I. Olson, Attorney General

Myron Just, Commissioner of Agriculture



Alex M. Yarsa
Division Manager
Production Department

June 8, 1978

Continental Oil Company
152 North Durbin
Pacific Western Life Building
Casper, Wyoming 82601
(307) 234-7311

State Geologist
University Station
Grand Forks, North Dakota 58201

Gentlemen:

Directional Survey
Dickinson Heath Sand Unit
Well No. 60
File: JO-416-CF



In accordance with Case No. 1550, Order No. 1685, Continental Oil Company herewith supplies you with three copies of the Directional Survey for Dickinson Heath Sand Unit Well No. 60. The well encountered the Heath "B" sand at approximately 1,199' from the east line and 652' from the north line of Section 2, Township 139 North, Range 97 West, Stark County, North Dakota.

The well encountered approximately 5' of "B" sand and casing was run and cemented. The well is now awaiting a completion rig.

If additional information is required other than the well completion form, logs, etc., please advise.

Very truly yours,

CONTINENTAL OIL COMPANY

Alex M. Yarsa
Division Manager

er
Attach.

cc: Ernest R. Fleck
Fleck, Mather, Strutz & Mayer, Ltd.
P. O. Box 1436
Bismarck, North Dakota 58501

C. M. Tarr File - Casper

** DIRECTIONAL SURVEY PROGRAM ** PRODUCTION ENGINEERING SERVICES ** CONTINENTAL OIL COMPANY **
** USE OF THESE RESULTS IS LIMITED TO THOSE OPERATIONS IN WHICH CONTINENTAL OIL COMPANY HAS AN INTEREST **

WELL NAME DICKINSON HEATH SAND UNIT 60
SURFACE LOCATION 1320' ENL, 760' FEL, SECTION 2
ELEVATION 2550.20 FEET ABOVE SEA LEVEL
SURVEY NUMBER 8
TYPE OF SURVEY STARK COUNTY N. D.
CORRECTED FOR MAGNETIC DECLINATION OF 13 DEG 25 MIN EAST
MEASUREMENTS FROM KELLEY DRIVE BUSHING
DATE OF SURVEY 5-24-78

CALCULATIONS BY RADIUS OF CURVATURE METHOD

COURSE LENGTH FT	MEASURED DEPTH FT	VERTICAL DEPTH FT	SUBSEA DEPTH FT	INCLINATION ANGLE DEG MIN	DIRECTION ANGLE DEG MIN	DIRECTION NORTH/SOUTH FT	COORDINATES EAST/WEST FT	DOGLEG SEVERITY DEG/100 FT
1	4540	4540	-1990	0 0	N 0 0 E	0 N	0 E	*****
63	4541	4541	-1991	1 15	N 1 0 E	0 N	0 E	5.16
91	4604	4604	-2054	4 30	N 0 0 E	3 N	0 E	3.02
92	4695	4694	-2144	7 15	N 0 0 E	12 N	0 E	1.13
64	4787	4786	-2235	7 45	N 7 0 E	24 N	1 E	5.06
94	4851	4849	-2299	7 45	N 17 0 W	33 N	0 E	2.89
62	4943	4940	-2390	9 30	N 30 0 W	46 N	-5 W	0.76
94	5037	5033	-2482	9 45	N 26 0 W	59 N	-13 W	1.31
94	5131	5125	-2575	9 0	N 20 0 W	74 N	-19 W	5.59
65	5196	5189	-2639	11 0	N 37 0 W	83 N	-24 W	2.19
89	5285	5277	-2727	11 15	N 47 0 W	96 N	-36 W	0.62
126	5411	5400	-2850	12 0	N 46 0 W	114 N	-54 W	1.53
123	5534	5520	-2970	13 45	N 43 0 W	133 N	-73 W	0.19
125	5659	5641	-3091	13 45	N 42 0 W	155 N	-93 W	0.61
124	5783	5762	-3212	14 0	N 45 0 W	177 N	-114 W	0.51
95	5878	5854	-3304	14 0	N 43 0 W	193 N	-130 W	0.58
94	5972	5945	-3395	14 15	N 41 0 W	210 N	-145 W	0.79
94	6066	6036	-3486	14 15	N 38 0 W	228 N	-160 W	0.0
40	6106	6075	-3525	14 15	N 38 0 W	236 N	-166 W	0.65
86	6192	6159	-3608	13 45	N 37 0 W	252 N	-179 W	1.25
163	6355	6317	-3767	12 30	N 30 0 W	283 N	-199 W	3.19
32	6387	6349	-3798	11 30	N 31 0 W	289 N	-202 W	1.50
100	6487	6447	-3897	10 0	N 31 0 W	305 N	-212 W	0.83
93	6580	6538	-3988	10 45	N 30 0 W	319 N	-220 W	0.48
94	6674	6631	-4080	11 0	N 28 0 W	335 N	-229 W	1.13
95	6769	6724	-4173	12 0	N 30 0 W	351 N	-238 W	1.88
93	6862	6814	-4264	13 45	N 30 0 W	369 N	-249 W	0.26
95	6957	6907	-4356	14 0	N 30 0 W	389 N	-260 W	1.33
94	7051	6998	-4447	15 0	N 33 0 W	409 N	-272 W	0.38
94	7145	7088	-4538	15 15	N 32 0 W	430 N	-285 W	1.06
94	7239	7179	-4629	16 15	N 32 0 W	452 N	-299 W	

** DIRECTIONAL SURVEY PROGRAM ** PRODUCTION ENGINEERING SERVICES ** CONTINENTAL OIL COMPANY **
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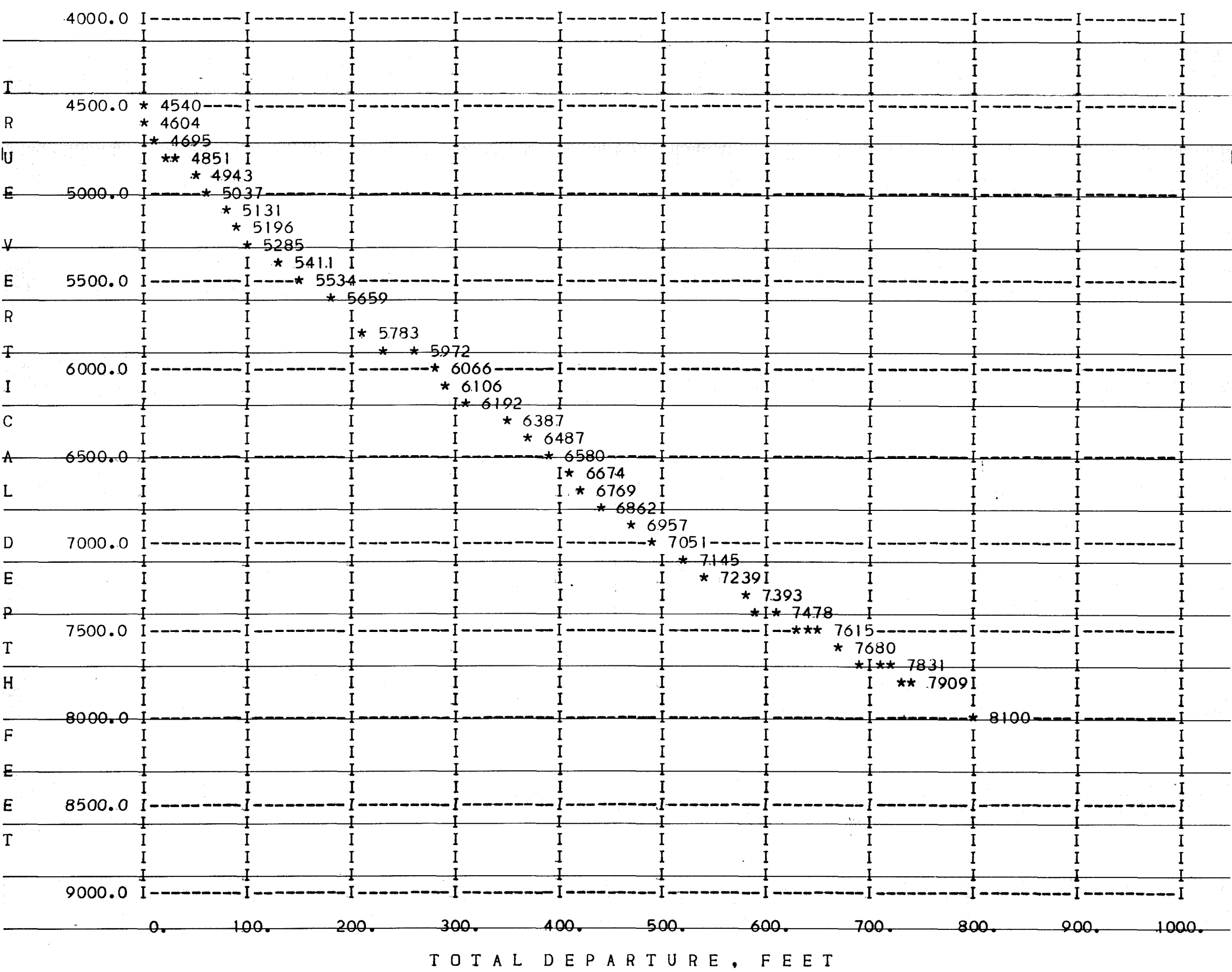
WELL NAME DICKINSON HEATH SAND UNIT 60
SURFACE LOCATION 1320' ENL, 760' FEL, SECTION 2
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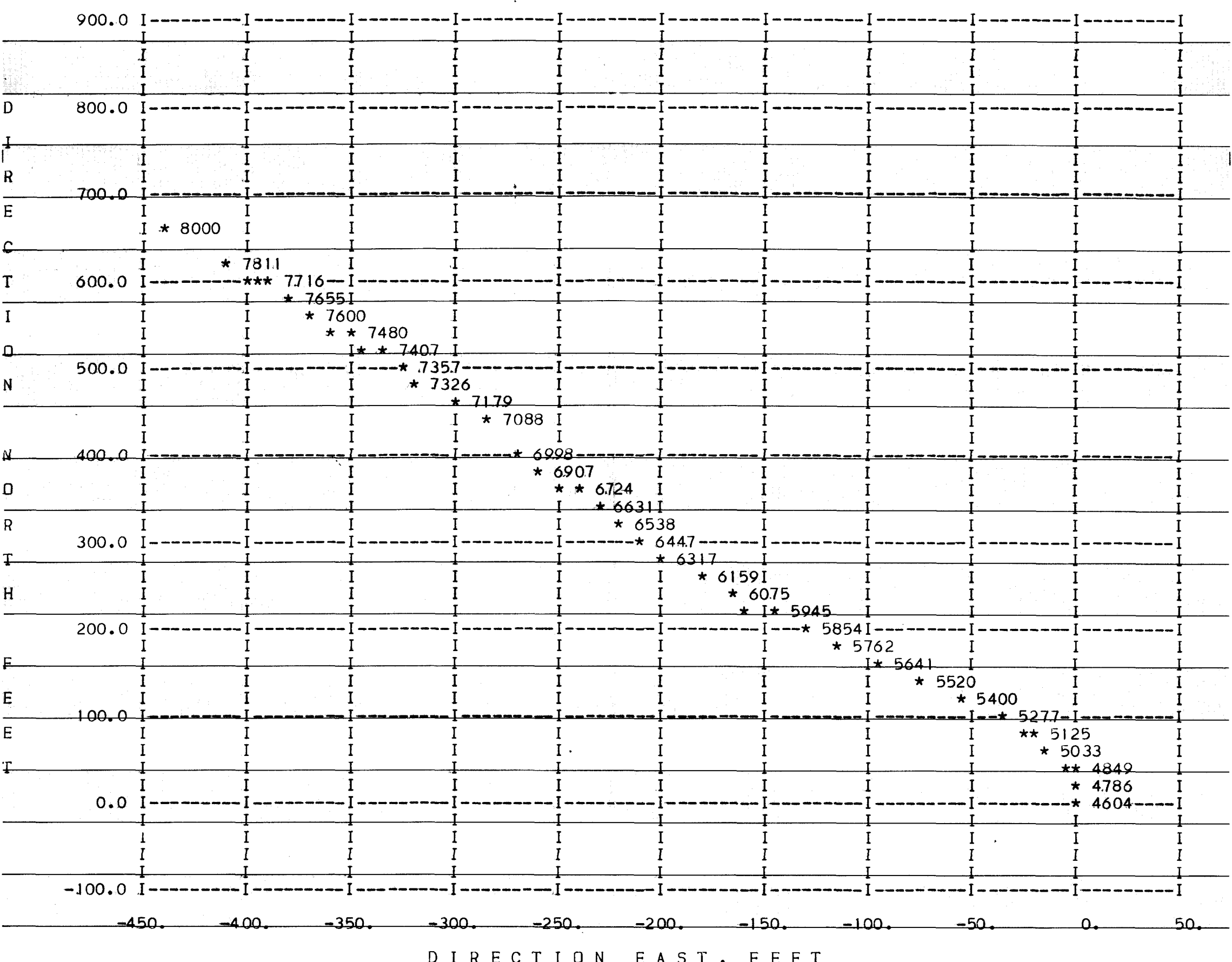
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154	7393	7326	-4776	16 45	N 31 0 W	489 N	-322 W	0.37
32	7425	7357	-4807	17 15	N 30 0 W	497 N	-327 W	1.81
53	7478	7407	-4857	19 0	N 31 0 W	511 N	-335 W	3.35
46	7524	7451	-4901	18 50	N 35 0 W	524 N	-343 W	2.84
31	7555	7480	-4930	17 45	N 34 0 W	532 N	-349 W	3.64
60	7615	7538	-4987	17 15	N 36 0 W	546 N	-359 W	1.30
65	7680	7600	-5049	17 45	N 36 0 W	562 N	-370 W	0.77
58	7738	7655	-5105	18 0	N 34 0 W	577 N	-381 W	1.14
64	7802	7716	-5165	18 30	N 34 0 W	593 N	-392 W	0.78
29	7831	7743	-5193	18 45	N 34 0 W	601 N	-397 W	0.86
27	7858	7769	-5218	17 45	N 34 0 W	608 N	-402 W	3.70
44	7902	7811	-5260	17 45	N 31 0 W	619 N	-409 W	2.08
7	7909	7817	-5267	16 45	N 36 0 W	621 N	-410 W	25.59
191	8100	8000	-5450	16 45	N 27 0 W	668 N	-439 W	1.36

HORIZONTAL DEPARTURE = 799 FEET AT NORTH 33 DEG 18 MIN WEST (GRID)

VERTICAL PLAN



HORIZONTAL PLAN



READY

BEFORE THE INDUSTRIAL COMMISSION
OF THE STATE OF NORTH DAKOTA

IN THE MATTER OF THE APPLICATION OF CONTINENTAL OIL
COMPANY FOR AN EMERGENCY ORDER OF THE COMMISSION TO
PERMIT THE DEVIATION OF THE WELL BORE OF THE
DICKINSON UNIT WELL NO. 60 LOCATED IN SECTION 2,
TOWNSHIP 139 NORTH, RANGE 97 WEST, STARK COUNTY,
NORTH DAKOTA.

CASE NO. 1550
ORDER NO. 1686

EMERGENCY ORDER OF THE COMMISSION

BY THE COMMISSION:

Pursuant to Rule 3, this cause came on for emergency hearing before the Industrial Commission of North Dakota, hereinafter referred to as the "Commission," on the 20th day of April, 1978.

NOW, on this 20th day of April, 1978, the Commission, a quorum being present, having considered the testimony adduced and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

(1) That the Commission has proceeded according to law in the exercise of its jurisdiction of this case and the subject matter thereof, and that an emergency exists.

(2) That the applicant has drilled the Dickinson Unit Well No. 60, located in the SE/4 of the NE/4 of Section 2, Township 139 North, Range 97 West, Stark County, North Dakota, to total depth and at that bottom hole location said well would not produce oil in economic quantity.

(3) That the applicant requested permission to plug back up the hole and directionally drill to a bottom hole location of 1100 feet from the east line and 760 feet from the north line of Section 2, Township 139 North, Range 97 West, Stark County, North Dakota.

(4) That all acreage is within the boundary of the Dickinson Heath Unit, Stark County, North Dakota.

IT IS THEREFORE ORDERED:

(1) That Continental Oil Company be, and is hereby permitted to deviate the well bore of the Dickinson Unit Well No. 60, located in Section 2, Township 139 North, Range 97 West, Stark County, North Dakota, and complete in the Heath Pool at a point approximately 1100 feet from the east line and 760 feet from the north line of said Section 2.

(2) That the applicant shall run a directional survey of said well and submit the results to the State Geologists.

(3) That correlative rights are protected because all acreage involved is within the Dickinson Heath Unit.

(4) That this order shall become effective on this date, and shall continue in full force and effect for 15 days.

(5) That the applicant shall appear before an examiner appointed by the Commission on the 1st day of May, 1978, to give testimony and evidence in support of this application.

DONE, in Bismarck, North Dakota, this 20th day of April, 1978.

THE NORTH DAKOTA INDUSTRIAL COMMISSION



Arthur A. Link, Governor



Allen I. Olson, Attorney General

Myron Just, Commissioner of Agriculture

APR 27 1978

CERTIFICATE OF PUBLICATION

THE DICKINSON PRESS
Dickinson, North Dakota

STATE OF NORTH DAKOTA, }
County of Stark. }

Gloria Foster, of said state and county, being first duly sworn, on oath says: That she is the Bookkeeper of the Dickinson Press, Inc., publisher of THE DICKINSON PRESS, a daily newspaper of general circulation, printed and published at Dickinson, in said county and state, and has been such during the time hereinafter mentioned; and that advertisement headed Notice Of Publication

NOTICE OF PUBLICATION
N. D. INDUSTRIAL COMMISSION
BISMARCK, NORTH DAKOTA
The State of North Dakota by its Industrial Commission hereby gives notice pursuant to law and the rules and regulations of said Commission promulgated thereunder of the following public hearing to be held at 1:30 p.m. on May 1, 1978, in the Office of the North Dakota Geological Survey, 219 East Broadway, Bismarck, North Dakota.
STATE OF NORTH DAKOTA TO:
All named parties and persons having any right, title, interest or claim in the following case and notice to the public: CASE NO. 1550: On a motion of the Commission to consider the application of Continental Oil Company for an order to permit the deviation of the wellbore of the Dickinson Heath Unit Well No. 60, located in Section 2, T139N, R97W, Stark County, North Dakota. For the purposes of this hearing, Wesley Norton and/or Gerald VandeWalle are hereby designated as trial examiners for the purpose of receiving testimony and exhibits.
(Published April 21, 1978)

a printed copy of which is hereunto annexed, was printed and published in THE DICKINSON PRESS, and in the regular and entire issue of each and every number 1 consecutive weeks, commencing on the 21 day of April A. D. 1978, and ending on the 21 day of April A. D., 1978, both inclusive.

Gloria Foster

Sworn to and subscribed to before me this 21 day of

April A. D. 1978

702
4-27-78
Date
mo
HAROLD NELSON
Printer

ED J. HAUCK
Notary Public, STARK COUNTY, N. DAK.
My Commission Expires JUNE 7, 1979

AFFIDAVIT OF PUBLICATION

STATE OF NORTH DAKOTA, }
County of Burleigh. } ss.
Patricia Hoffman

being duly sworn,
says that she is a clerk of the Bismarck Tribune Company and that
the annexed printed copy of
"Notice of Publication"

was taken from The Bismarck Tribune, a daily newspaper, which
during the whole time of publication of said notice hereinafter
stated, has been, and was printed and published in the City of
Bismarck, County of Burleigh, and State of North Dakota. That
the said notice was published in said newspaper on the following
dates: 4/21

in each and every issue of the full number thereof, commencing
on the 21 day of April 1978, and
ending on the 21 day of April 1978,
upon which days or times of publication aforesaid the said news
paper was regularly published.

Subscribed and sworn to before this 25 day of
April, A. D. 1978

Paul J. Patera
Notary Public, Burleigh County, N. D.

My commission expires 3-24-82

Cost of Publication, \$ 11.22

AL-88
ph

PAUL J. PATERA
NOTARY PUBLIC, BURLEIGH CO., ND
My Commission Expires MAR 24, 1982

OK
Date 4-27-78
m
HAROLD NELSON
State Printer

NOTICE OF PUBLICATION
N.D. INDUSTRIAL
COMMISSION
BISMARCK, NORTH DAKOTA
The State of North Dakota by its
Industrial Commission hereby
gives notice pursuant to law and
the rules and regulations of said
Commission promulgated
thereunder of the following public
hearing to be held at 1:30 p.m. on
May 1, 1978, in the Office of the
North Dakota Geological Survey,
219 East Broadway, Bismarck,
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STATE OF
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4/21-51195

