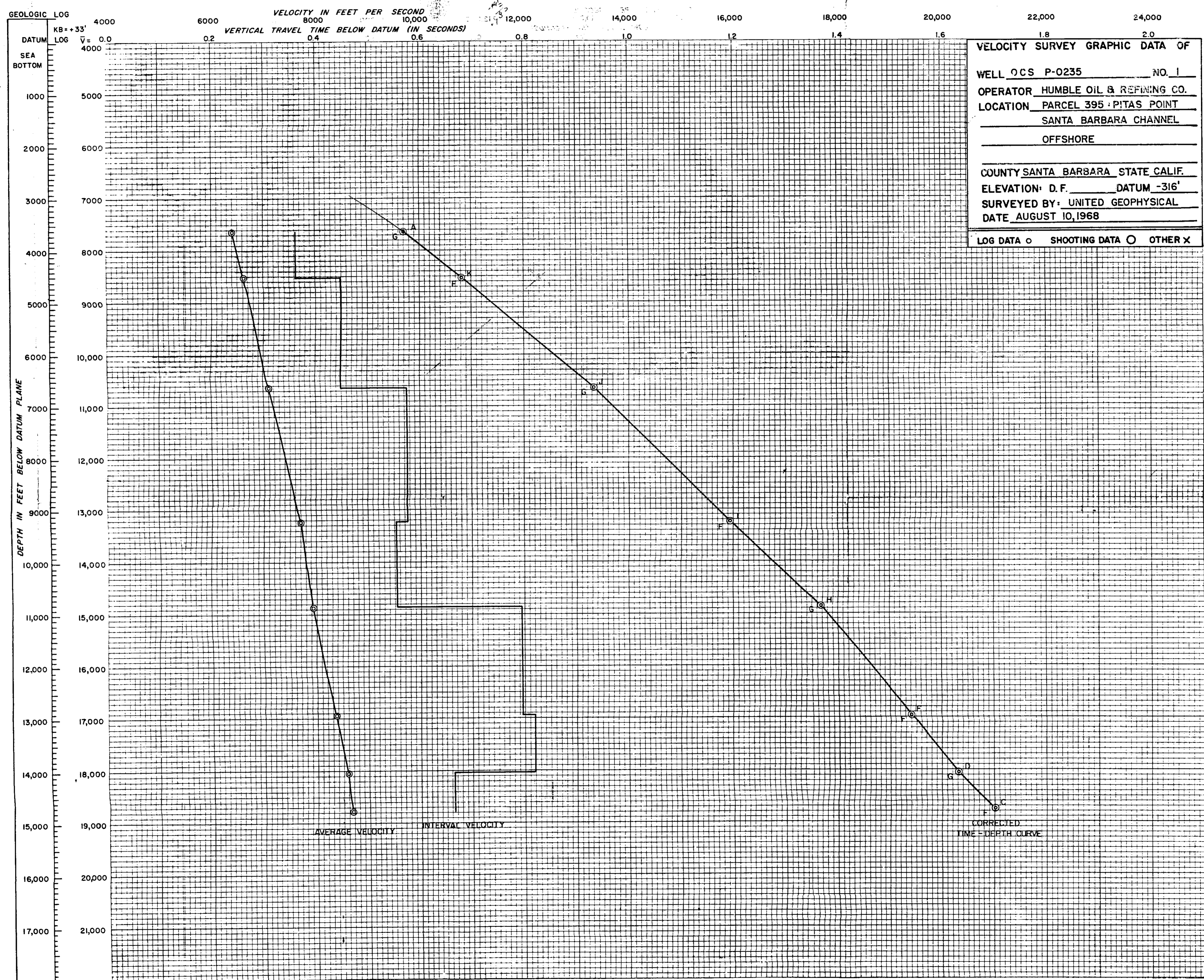


VS1004



VELOCITY SURVEY GRAPHIC DATA OF
WELL OCS P-0235 NO. 1
OPERATOR HUMBLE OIL & REFINING CO.
LOCATION PARCEL 395 PITAS POINT
SANTA BARBARA CHANNEL
OFFSHORE
COUNTY SANTA BARBARA STATE CALIF.
ELEVATION: D.F. DATUM -316'
SURVEYED BY: UNITED GEOPHYSICAL
DATE AUGUST 10, 1968
LOG DATA o SHOOTING DATA x OTHER x

HUMBLE OIL & REFINING COMPANY

LOS ANGELES, CALIFORNIA 90067

1800 AVENUE OF THE STARS

WELL VELOCITY SURVEY

NOTED WRIGHT

RECEIVED

AUG 10 1968

HUMBLE OIL & REFINING COMPANY
WELL SURVEY - WELL NO. OCS P-0235 NO. 1
August 10, 1968

MINERALS MGT. SERVICE
VENTURA DISTRICT

United Geophysical Corporation conducted a well velocity survey for Humble Oil & Refining Company in Humble's well, OCS P-0235 No.1, on August 10, 1968

The total depth of the well was 15,131 feet. A pressure sensitive (SSC Model 640) well geophone was used for the survey. Recordings were taken in an interval of 4,000 feet through 15,131 feet.

GEOPHONE SURVEY:

Twelve shots of twenty or forty pounds (Shots D, E and L were forty pounds and the rest were twenty pounds) were dropped from the shooting boat at distances from the well ranging from 745 feet to 1,935 feet. The shot depth was fifty feet. Only eight of the shots were used. Three reference geophones were used to locate the charge distance from the well. These were located as follows: One at each end of the drilling barge and one in the center. All were at a depth of fifty feet below sea level (See Figure 1).

A water velocity of 4,800 feet/sec. was used to compute the distance of the shot from the well. The direction of the shot from the well was computed by converting the times of the three reference geophones to distance. The three distances were used as radii to locate the shot point. The horizontal distance from the well to the shot point was then measured (See Figure 1).

A datum plane of -316 feet (sea floor at well) was used to correct times and depths of the twelve shots.

Shots were lettered from A. to L. Shots A through D were shot from the south side of the barge as the well geophone was being lowered into the hole. Shots E through L were shot from the north side of the barge as the well geophone was being raised. Shots L, B and E were not used in the computations because of the quality of the records and shot G was not used because it lacked a reference geophone time break.

Four distinct velocity changes are observed from the corrected velocity survey. Slower to faster velocities are shown to occur at points K, 4,511 feet below datum; J, 6,651 feet below datum; and H, 10,861 feet below datum. A faster to a slower velocity occurs at D, 14,051 feet below datum.

The record breaks were generally fair to good.

HUMBLE OIL & REFINING COMPANY

By:

James E. Dobkins, Jr.
James E. Dobkins, Jr.

JED:dpc

APPROVED BY:

R. E. Bearnth

R. E. Bearnth
District Geophysicist

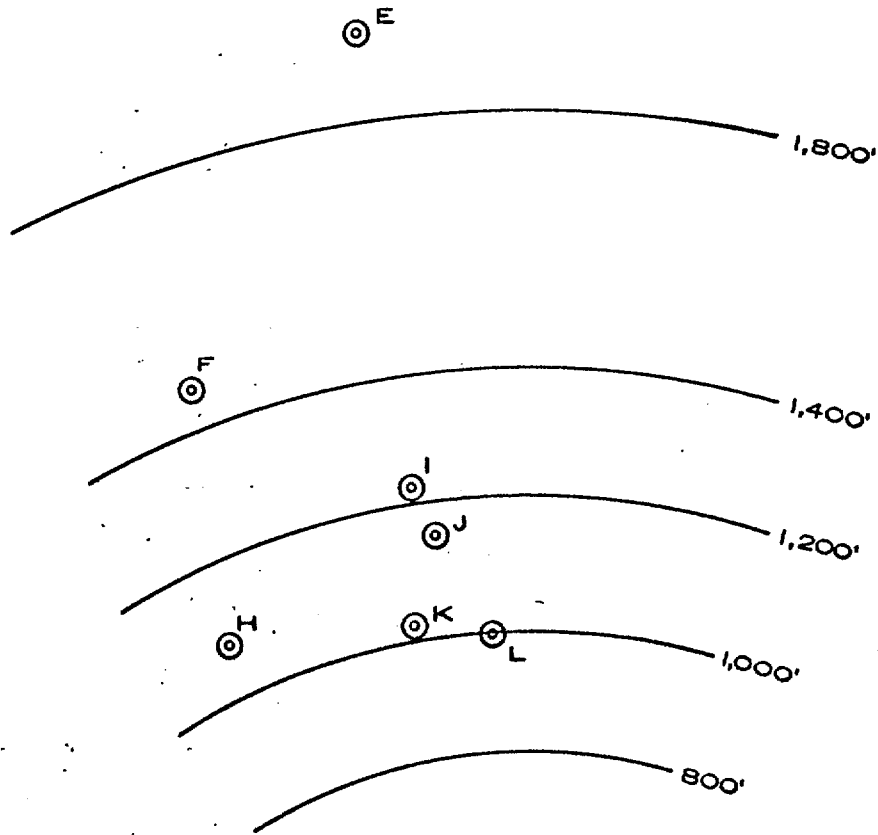
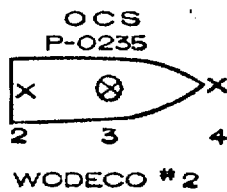
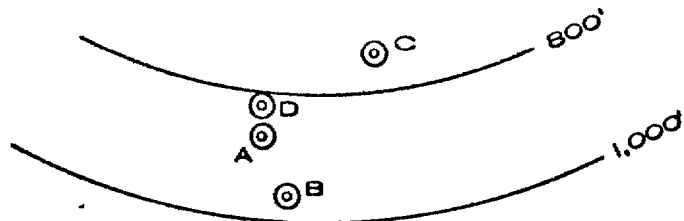


FIGURE 1

LOCATION PLOT SHOWING
 ORIENTATION OF SHOT POINTS
 AND REFERENCE GEOPHONES
 USED IN VELOCITY SURVEY OF
OCS P-0235
 FOR
HUMBLE OIL & REFINING CO.



SCALE: 1"=300'



GEOLOGIC LOG

DATUM LOG

SEA BOTTOM

KB + 33'

V = 0.0

4000

5000

6000

7000

8000

9000

10,000

11,000

12,000

13,000

14,000

15,000

16,000

17,000

18,000

19,000

20,000

21,000

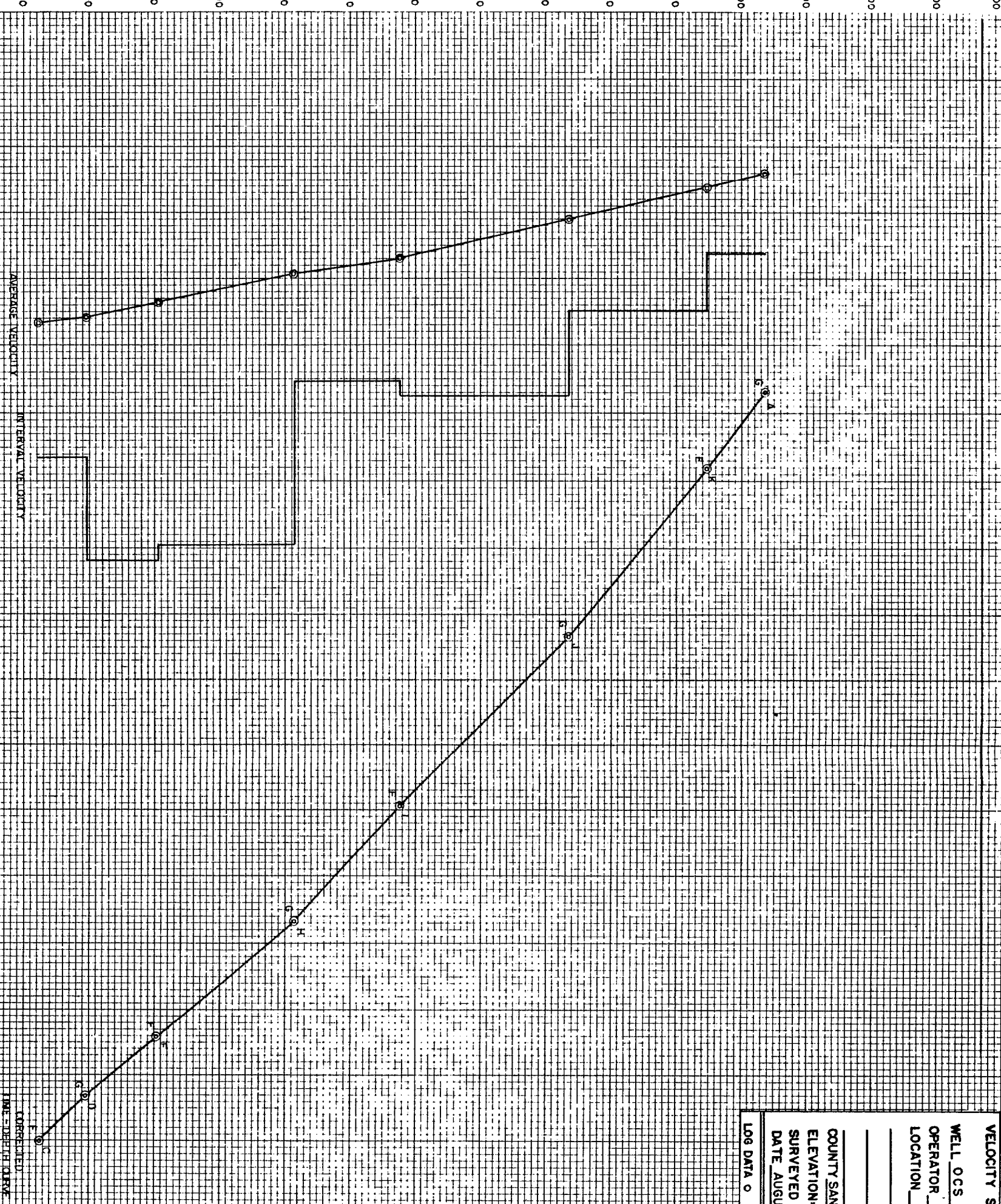
DEPTH IN FEET BELOW DATUM PLANE

VELOCITY IN FEET PER SECOND

VERTICAL TRAVEL TIME BELOW DATUM (IN SECONDS)

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0

6000 8000 10,000 12,000 14,000 16,000 18,000 20,000 24,000



CORRECTED TIME-DERIVED CURVE

VELOCITY SURVEY GRAPHIC DATA OF

WELL OCS P-0235 NO. 1

OPERATOR HUMBLE OIL & REFINING CO

LOCATION PARCEL 395 - PITAS POINT

SANTA BARBARA CHANNEL

OFFSHORE

COUNTY SANTA BARBARA STATE CALIF

ELEVATION: D. F. DATUM -316'

SURVEYED BY: UNITED GEOPHYSICAL

DATE AUGUST 10, 1968

LOG DATA ○ SHOOTING DATA ○ OTHER X

ELEVATION WELL LOCATION

COMPANY*HUBBLE OIL AND REFINING COMPANY | KB 33 FL | SANTA BARBARA CHAHNELSANTA BARBARA COUNTY
 WELL* OCS P-0235 | GHT 0FT | SANTA BARBARA COUNTY, CALIF.

Datum Elev.= -316.0 | Weathering Vol.= 4800 ft./Sec.

Dgs	LI	tani	cosi	TGS	Ds-I	Ds-I/Vec	DELTA	DELTA	DELTA	VI	Va
(L) A	3917 4000	.2221	.9762 975	.625	-266	-.0554	635.5703.636	50513467	.360	.112	7626
K	4777 4860	.2124	.9781 977	.737	-266	-.0554	747.6821.748	45114817	2140	.251	8496
J	6917 7000	.1662	.9804 986	.989	-266	-.0554	999.9540.1000	66516967	2560	.262	9765
I	9477 9560	.1292	.9917	1.251	-266	-.0554	1.2611.1961.262	92119527	1650	.172	9551
H	11127 11210	.0968	.9953	1.424	-266	-.0554	1.4321.3689.435	108611177	2060	.173	11963
F	13207 13290	.1109	.9939	1.598 1.580	-266	-.0554	1.6081.5427.1649	129413257	1110	.091	12193
E	14517 14400	.0573	.9983	1.689	-266	-.0554	1.6991.6338.7700	1405114367	731	.068	10652
C	15048 15131	.0495	.9987	1.757	-266	-.0554	1.7024.1788.1769	147821500			8682

Shots ~~A, B, C, E~~ not used in computations.

316 x
260
1264
682
31400

6396
) 3651 (.571
31426
2250
1713
5370
512310

Shothole Information- Elevation, Distance & Direction from Well

VELOCITY SURVEY SHOT FOR HUMBLE OIL CO.

SPNO	SHHO	Gnd Elev.	Dsm	Ds	tub	tr	T	Read.	Gr.	H
1	A	0	4000	50	.0	0.	.641	870	G	.640 - 642 ✓ <i>prov</i>
2	K	0	4860	50	.0	0.	.754	1015	E	
3	J	0	7000	50	.0	0.	1.003	1150	G	1.001
4	I	0	9560	50	.0	0.	1.262	1225	E	(1.252 - 1300 B)
5	H	0	11210	50	.0	0.	1.431	1078	G	1.429
6	F	0	13290	50	.0	0.	1.608	1465	E	1.579 P. <i>WKC</i>
7	D	0	14400	50	.0	0.	1.692	821	G	1.691
8	C	0	15131	50	.0	0.	1.760	745	F	✓

Number of checkshots= 8