



**REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY**

HARVEY YATES COMPANY

COMPANY

YOUNG DEEP NO. 8 - 1/2

WELL NAME

LEA COUNTY, NEW MEXICO

LOCATION

JOB NUMBER

430-0678

TYPE OF SURVEY

GYROSCOPIC MULTI SHOT SURVEY

DATE

10-22-87

SURVEY BY
GARY DESPAIN

OFFICE
WEST TEXAS BASE

RECEIVED

JAN 25 1989

002
WORK OFFICE

HA E. YATES
 YC JEEP NO. 8
 LF INTY, NEW XICO

DATE PRINTED : 04-JAN-88
 JUR REF. NO. : S0123.7HZ
 DECLINATION : 10.0 DB NUMBER :

GE NO. 2

ASURED PTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	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 N 0.00 E	0.00
100.00	0 15	N 41 0 W	100.00	100.00	0.16 N 0.14 W	0.25
200.00	0 30	N 55 0 W	100.00	200.00	0.60 N 0.63 W	0.26
300.00	0 30	N 61 0 W	100.00	299.99	1.06 N 1.37 W	0.05
400.00	0 45	N 71 0 W	100.00	399.99	1.51 N 2.37 W	0.27
500.00	0 30	N 56 0 W	100.00	499.99	1.99 N 3.34 W	0.30
600.00	0 30	N 56 0 W	100.00	599.99	2.48 N 4.06 W	0.00
700.00	0 30	N 52 0 W	100.00	699.99	2.99 N 1.77 W	0.03
800.00	0 30	N 53 0 W	100.00	799.99	3.53 N 3.46 W	0.01
900.00	0 30	N 56 0 W	100.00	899.99	4.03 N 3.17 W	0.03
1000.00	0 45	N 37 0 W	100.00	999.99	4.78 N 3.96 W	0.32
1100.00	0 45	N 50 0 W	100.00	1099.99	5.73 N 7.86 W	0.17
1200.00	0 45	N 52 0 W	100.00	1199.99	6.55 N 3.88 W	0.03
1300.00	0 30	N 32 0 W	100.00	1299.99	7.36 N 3.61 W	0.33
1400.00	0 30	N 7 0 W	100.00	1399.99	8.18 N 2.89 W	0.22
1500.00	0 30	N 1 0 E	100.00	1499.99	9.05 N 2.94 W	0.07
1600.00	0 30	N 30 0 E	100.00	1599.99	9.88 N 2.71 W	0.25
1700.00	0 30	N 40 0 E	100.00	1699.99	10.59 N 2.21 W	0.09
1800.00	0 30	N 31 0 E	100.00	1799.99	11.30 N 3.70 W	0.00
1900.00	0 30	N 48 0 E	100.00	1899.99	11.97 N 3.15 W	0.1
2000.00	0 15	N 57 0 E	100.00	1999.99	12.37 N 1.63 W	0.26
2100.00	0 30	N 41 0 E	100.00	2099.99	12.80 N 1.14 W	0.27
2200.00	0 45	N 34 0 E	100.00	2199.99	13.67 N 1.47 W	0.26
2300.00	0 45	N 47 0 E	100.00	2299.99	14.66 N 1.62 W	0.17
2400.00	1 15	N 29 0 E	100.00	2399.99	16.03 N 1.55 W	0.58
2500.00	1 15	N 24 0 E	100.00	2499.99	17.98 N 1.58 W	0.11
2600.00	1 15	N 14 0 E	100.00	2599.99	20.04 N 1.87 W	0.22
2700.00	1 0	N 11 0 W	100.00	2699.99	21.99 N 3.82 W	0.54
2800.00	1 0	N 31 0 W	100.00	2799.99	23.61 N 3.44 W	0.35
2900.00	1 0	N 57 0 W	100.00	2899.99	24.86 N 1.65 W	0.45



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JAN 9 5 1983

OFFICE
GENERAL SERVICE

SURED PTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	R E C T A N G U L A R C O O R D I N A T E S	DOGLEG SEVERITY
3000.00	1 0	N 46 0 W	100.00	2999.77	25.94 N 6.01 W	0.19
3100.00	0 45	N 49 0 W	100.00	3099.76	26.97 N 7.13 W	0.25
3200.00	0 30	N 35 0 W	100.00	3199.75	27.78 N 7.86 W	0.29
3300.00	0 30	N 27 0 W	100.00	3299.75	28.53 N 8.31 W	0.07
3400.00	0 30	N 29 0 W	100.00	3399.74	29.30 N 8.72 W	0.02
3500.00	0 30	N 35 0 W	100.00	3499.74	30.04 N 9.18 W	0.05
3600.00	0 45	N 34 0 W	100.00	3599.73	30.94 N 9.80 W	0.25
3700.00	0 45	N 36 0 W	100.00	3699.72	32.01 N 10.55 W	0.03
3800.00	0 30	N 42 0 W	100.00	3799.72	32.86 N 11.24 W	0.26
3900.00	0 30	N 56 0 W	100.00	3899.71	33.43 N 11.90 W	0.12
4000.00	0 45	N 50 0 W	100.00	3999.71	34.09 N 12.77 W	0.26
4100.00	1 0	N 49 0 W	100.00	4099.70	35.08 N 13.93 W	0.25
4200.00	1 0	N 55 0 W	100.00	4199.68	36.15 N 15.31 W	0.10
4300.00	1 0	N 49 0 W	100.00	4299.67	37.23 N 16.68 W	0.10
4400.00	1 0	N 43 0 W	100.00	4399.65	38.44 N 17.93 W	0.10
4500.00	1 15	N 35 0 W	100.00	4499.63	39.97 N 19.17 W	0.29
4600.00	1 0	N 36 0 W	100.00	4599.61	41.56 N 20.31 W	0.25
4700.00	1 15	N 45 0 W	100.00	4699.59	43.06 N 21.59 W	0.31
4800.00	1 15	N 35 0 W	100.00	4799.57	44.73 N 22.99 W	0.27
4900.00	1 15	N 37 0 W	100.00	4899.54	46.49 N 24.27 W	0.0
5000.00	1 0	N 29 0 W	100.00	4999.52	48.14 N 25.34 W	0.29
5100.00	1 15	N 33 0 W	100.00	5099.50	49.82 N 26.35 W	0.26
5200.00	1 15	N 34 0 W	100.00	5199.48	51.64 N 27.55 W	0.02
5300.00	1 15	N 47 0 W	100.00	5299.46	53.29 N 28.97 W	0.28
5400.00	1 15	N 48 0 W	100.00	5399.43	54.77 N 30.57 W	0.02
5500.00	1 30	N 45 0 W	100.00	5499.40	56.42 N 32.31 W	0.26
5600.00	1 45	N 48 0 W	100.00	5599.36	58.37 N 34.37 W	0.26
5700.00	1 30	N 47 0 W	100.00	5699.32	60.29 N 36.46 W	0.25
5800.00	1 30	N 51 0 W	100.00	5799.29	62.00 N 38.44 W	0.10
5900.00	1 30	N 45 0 W	100.00	5899.25	63.76 N 40.38 W	0.16

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HARV (E. YATES
YOUR DEEP NO. 8
LEA UNTY, NEW MEXICO

DATE PRINTED : 04-JAN-88
REF. NO. : S01232.7HZ
NUMBER :

PAGE NO. 4

DECLINATION : 10.00

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	R E C C O O D I N A T E S	DOGLEG SEVERITY
6000.00	1 30	N 47 0 W	100.00	5999.22	65. 7 N 42.26 W	0.05
6100.00	1 45	N 44 0 W	100.00	6099.18	67. 6 N 44.29 W	0.26
6200.00	2 0	N 44 0 W	100.00	6199.13	69. 1 N 46.56 W	0.25
6300.00	1 45	N 47 0 W	100.00	6299.07	72. 1 N 48.89 W	0.27
6400.00	2 0	N 50 0 W	100.00	6399.02	74. 7 N 51.34 W	0.27
6500.00	1 45	N 48 0 W	100.00	6498.97	76. 2 N 53.81 W	0.26
6600.00	1 45	N 44 0 W	100.00	6598.92	78. 4 N 56.01 W	0.12
6700.00	1 45	N 45 0 W	100.00	6698.87	80. 2 N 58.15 W	0.03
6800.00	1 45	N 51 0 W	100.00	6798.83	82. 6 N 60.42 W	0.18
6900.00	1 45	N 45 0 W	100.00	6898.78	84. 1 N 62.69 W	0.18
7000.00	2 0	N 38 0 W	100.00	6998.73	87. 5 N 64.85 W	0.34
7100.00	2 0	N 36 0 W	100.00	7098.67	90. 4 N 66.95 W	0.07
7200.00	2 15	N 27 0 W	100.00	7198.60	93. 0 N 68.89 W	0.42
7300.00	2 15	N 7 0 W	100.00	7298.52	97. 3 N 70.03 W	0.78
7400.00	2 15	N 14 0 E	100.00	7398.44	100. 3 N 69.79 W	0.82
7500.00	2 30	N 1 0 E	100.00	7498.36	105. 3 N 69.25 W	0.59
7600.00	2 30	N 15 0 E	100.00	7598.26	109. 4 N 68.65 W	0.61
7700.00	2 45	N 10 0 E	100.00	7698.16	113. 3 N 67.66 W	0.34
7800.00	2 45	N 9 0 E	100.00	7798.04	118. 3 N 66.86 W	0.05
7900.00	2 45	N 5 0 E	100.00	7897.93	123. 3 N 66.28 W	0.1
8000.00	2 45	N 5 0 E	100.00	7997.81	128. 3 N 65.86 W	0.00
8100.00	2 45	N 1 0 W	100.00	8097.69	132. 3 N 65.69 W	0.29
8200.00	3 0	N 7 0 E	100.00	8197.57	137. 3 N 65.43 W	0.47
8300.00	3 15	N 7 0 E	100.00	8297.42	143. 3 N 64.77 W	0.25
8400.00	3 45	N 15 0 E	100.00	8397.23	149. 3 N 63.60 W	0.70
8500.00	4 0	N 13 0 E	100.00	8497.01	155. 3 N 61.97 W	0.28
8600.00	4 0	N 17 0 E	100.00	8596.76	162. 3 N 60.16 W	0.28
8700.00	3 30	N 24 0 E	100.00	8696.55	168. 3 N 57.87 W	0.68
8800.00	2 30	N 27 0 E	100.00	8796.41	173. 3 N 55.62 W	1.01
8895.00	2 30	N 21 0 E	95.00	8891.32	177. 3 N 53.94 W	0.28

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HARVEY E. YATES
YOUNG DEEP NO. 8
LEA COUNTY, NEW MEXICO

DECLINATION : 10.00
DATE PRINTED : 04-JAN-88
OUR REF. NO. : S01232.7HZ
NUMBER :

PAGE NO. 5

MEASURED DEPTH	DRIFT ANGLE D M	DRIFT DIRECTION D M	COURSE LENGTH	TRUE VERTICAL DEPTH	R E C C O O	A N G U L A R D I N A T E S	BOGLED SEVERITY
8908.00	2 15	N 22 0 E	13.00	8904.31	177. 0 N	53.74 W	1.95
8920.00	2 30	N 19 0 E	12.00	8916.30	178. 7 N	53.56 W	2.33
8930.00	2 30	N 16 0 E	10.00	8926.29	178. 3 N	53.43 W	1.31
8940.00	2 15	N 17 0 E	10.00	8936.28	178. 3 N	53.32 W	2.53
8950.00	2 15	N 15 0 E	10.00	8946.27	179. 5 N	53.21 W	0.79
9000.00	1 45	N 14 0 E	50.00	8996.24	181. 5 N	52.77 W	1.00

CLOSURE - DISTANCE : 188.18
DIRECTION : N 16 13 W

REPORT UNITS : Feet
SURVEY CALCULATION METHOD : Radius of curvature

SURVEY RUN INFORMATION

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GYROSCOPIC MULTI SHOT SURVEY
SURVEYOR: GARY DESPAIN
430-0678
(0-7000')



2103 Market, Midland, Texas 79703, Phone: (915) 694-9517, (915) 563-0511

SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

I, Gary Despain, in the employ of Eastman Christensen, Inc. did on the days of October 22, 19 87 thru October 23, 19 87 conduct or supervise the taking of a Gyroscopic Multi Shot survey by the method of magnetic orientation from a depth of 0 feet to 9000 feet, with recordings of inclination and direction being obtained at approximate intervals of 100 feet.

This survey was conducted at the request of Harvey E. Yates Company for their Young Deep Well No. 8, Lea County, State of New Mexico, in the

This data for this survey and the calculation were obtained and performed by me according to standards and procedures as set forth by Eastman Christensen, Inc. and is true and correct to the best of my knowledge.

Gary Despain
Directional Supervisor/Surveyor

The data for this survey has been examined by me and conforms to principles and procedures set forth by Eastman Christensen, Inc.

Michael E. Pelt

Before me, the undersigned authority, on this day personally appeared Gary DeSpain, known to me to be the person whose name is subscribed to this instrument, who after being by me duly sworn on oath, states that he has knowledge of all the facts stated above and that this instrument is a true statement of facts therein recited.

Subscribed and sworn to before me on this _____ day of _____, 19____

Notary Public in and for the
County of Midland, Texas
My commission expires _____

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JUN 13 1988

USC
HOBBS OFFICE

100

1000

3000

4000

5000

6000

7000

8000

9000

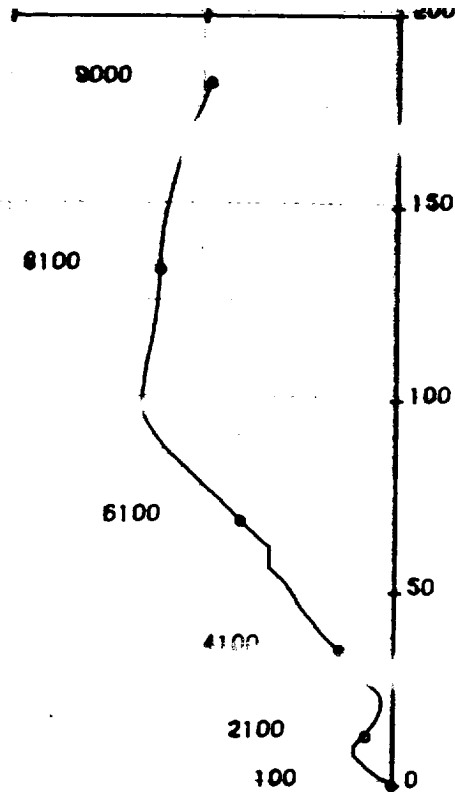
10000

4100

6100

8100

9000



SCALE 1"=50FT.

NOTE: COORDINATES RELATIVE
TO SLOT

SURVEY: S01232.7HZ

HARVEY E. YATES
YOUNG DEEP NO. 8
LEA COUNTY, NEW MEXICO

N MEXICO OIL CONSERVATION COMMISS
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-120
Effective 1-1-65

Operator HARVEY YATES COMPANY			Lease YOUNG DEEP UNIT		Well No. 8
Unit Letter A	Section 9	Township 18 South	Range 32 East	County Lea Co	
Actual Footage Location of Well: 660 feet from the North line and 860 feet from the East line					
Ground Level Elev. 3844.3	Producing Formation Bone Spring		Pool N. Young Bone Spring	Dedicated Acreage: 40 Acres	

1. Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

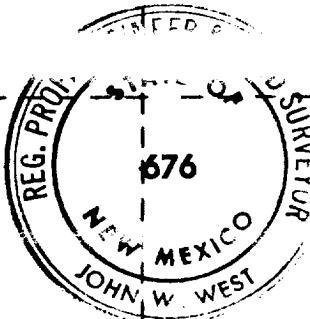
☒ Yes ☐ No If answer is "yes," type of consolidation Unitization

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)

No allowable will be assigned to the well if all interests have been consolidated by communitization, unitization, forced-pooling, or otherwise) or unless a standard unit, eliminating such interests, has been approved by the Commission.

Final Station: MD: 9000' TVD: 8996.24' Coor: North 181.05' West 52.77' Closure: 188.58 At A N 16° 15' W	LC-054009-d 660' 860' Galaxy Oil Co 1/2 Gulf Oil Corp 1/2 Charlesworth 1/4 Estate USA
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CERTIFICATION	
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.	
<i>Peck Hardee</i>	
Name	Peck Hardee
Position	Engineer

	
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Date	August 17, 1981
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge.	
Date Surveyed	8/10/81
Registered Professional Engineer and/or Land Surveyor	
<i>John W. West</i>	
Certificate No.	JOHN W. WEST 676 PATRICK A. ROMERO 6083



RECEIVED

JAN 25 1988

OCG

HOBBY OFFICE