



REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY

Gulf Energy & Minerals U.S.
COMPANY

Central Drinkard Unit # 420
WELL NAME

Lea County, New Mexico
LOCATION

JOB NUMBER	TYPE OF SURVEY	DATE
WT 1176-G2411	Gyro	11-16-76
WT 1176-S0249	Magnetic Multi Shot	11-19-76
WT 1276-So2070	Magnetic Multi Shot	12-6 -76

SURVEY BY

OFFICE



P. O. Box 5577 / Midland, Texas 79701 / (915) 563-0511
TWX 910-881-5066 / Cable: EASTCO

STATE OF TEXAS
COUNTY OF MIDLAND

I, Ray Warner, in the employ of the Directional Drilling Department of Eastman Whipstock, Inc. did on the days of 11-16, 1976 thru _____, 19____ conduct or supervise the taking of a Gyroscopic Survey by the method of Magnetic Oriented Survey from a depth of 0 feet to 1098 feet, with records of inclination being taken at approximately every 100 feet.

This survey was conducted at the request of Gulf Energy and Minerals U.S. for their Central Drinkard Unit Well No. 420, Lea county, State of New Mexico, in the _____ field.

Ray Warner

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared Ray Warner, 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 the same is a true and correct statement of facts therein recited.

Subscribed and sworn to before me on this 11th day of December, 1976.

Phyllis J. Copeland
Notary Public in and for the county of
Midland, Texas

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ILE	
U.S.G.S.	
AND OFFICE	
OPERATOR	

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old
C-102 and C-103
Effective 1-1-65

SUNDRY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO REOPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE APPLICATION FOR PERMIT TO DRILL (FORM C-101) FOR SUCH PROPOSALS.

OIL WELL ☐ GAS WELL ☒ OTHER ☐

Name of Operator
Gulf Oil Corporation

Address of Operator
Box 670, Hobbs, New Mexico 88240

Location of Well
UNIT LETTER **J** **2300** FEET FROM THE **South** LINE AND **1520** FEET FROM
THE **East** LINE, SECTION **33** TOWNSHIP **21-S** RANGE **37-E** NMPM.

15. Elevation (Show whether DF, RT, GR, etc.)
3443' GL

5a. Indicate Type of Lease
State ☐ Fee ☒

5. State Oil & Gas Lease No.

7. Unit Agreement Name
Central Drinkard Unit

8. Farm or Lease Name

9. Well No.
420

10. Field and Pool, or Wildcat
Drinkard

12. County
Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	PLUG AND ABANDONMENT ☐
WELL OR ALTER CASING ☐	OTHER ☐	CASING TEST AND CEMENT JOBS ☒	OTHER ☐

Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

6779' TD, 6502' TVTD, PB 6757'

Reached total depth of 7-7/8" hole at 6779' at 3:00 PM, December 6, 1976. Ran 162 joints and 1 cut joint, 6768' of 5-1/2" OD 15.50# K-55 LT&C casing set at 6779' with DV tool at 3379'. Cemented first stage with 350 sacks of lite cement and 300 sacks of Class C with 5% CFR2. Cement circulated. Cemented second stage with 800 sacks of Class C with 16% gel, 2% salt and 100 sacks of Class C Neat. Cement circulated. WOC over 24 hours. Cleaned out and tested casing with 2,000#, 30 minutes, OK.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

BY *D. F. Berlin* TITLE Area Engineer DATE December 27, 1976

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

CENTRAL DRINKARD UNIT GAS WELLS (400 Series)

Production acctg

Skelly Oil Co.
Box 1351
Midland, Texas 79701

Marathon Oil Co.
B. W. Harrison
Box 552
Midland, Texas 79701

J. E. Owens
SONIO Petroleum Company
1100 Penn Tower
Oklahoma City, Oklahoma 73118

~~Alex Clarke, Jr.~~
Amoco Production Company
~~Box 367~~
Andrews, Texas 79714

V.E. Haley

Don H

Levelland 24 79336

~~R. C. Johnson~~
Amoco Production Company
Box 3092
Houston, Texas 77001

Joe A. Pearce
Sun Oil Co.
12850 Hillcrest Road
Dallas, Texas 75230

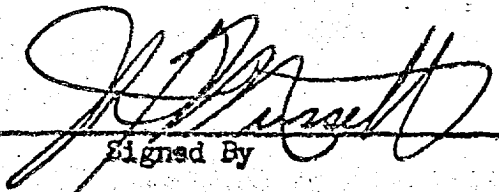
Sam Bills
Sun Oil Co.
Box 1861
Midland, Texas 79701

G. Thane Akins
ARCO Company
Box 1610
Midland, Texas

Mobil Oil Corporation
Box 633
Midland, Texas 79701

The following logs, on Gulf's Central Drinkard Unit No. 420
were mailed to the Oil Conservation Commission - United States Geological Survey
on 12-14-76:

GR-Sonic	_____
GR-Neutron	_____
ES-I	_____
Microlog	_____
Laterlog	_____
Microlaterlog	_____
Bond Log	_____
Others	_____
<u>GR-Density</u>	<u>✓</u>
_____	_____


Signed By



P. O. Box 5577 / Midland, Texas 79701 / (915) 563-0511
TVX 910-881-5066 / Cable: EASTCO

STATE OF TEXAS
COUNTY OF MIDLAND

I, James Blackledge, in the employ of the Directional Drilling Department of Eastman Whipstock, Inc. did on the days of 11-19, 1976 thru _____, 19____ conduct or supervise the taking of a Multiple Shot Survey by the method of Magnetic Oriented Survey from a depth of 1098 feet to 3000 feet, with records of inclination being taken at approximately every 91 feet.

This survey was conducted at the request of Gulf Energy and Minerals U.S. for their Central Drinkard Unit Well No. 420, Lea county, State of New Mexico, in the _____ field.

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared James Blackledge, 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 the same is a true and correct statement of facts therein recited.

Subscribed and sworn to before me on this 11th day of December, 1976.

Notary Public in and for the county of
Midland, Texas



P. O. Box 5577/Midland, Texas 79701/(915) 563-0511
TWX 910-881-5066/Cable: EASTCO

STATE OF TEXAS
COUNTY OF MIDLAND

I, Ray Warner, in the employ of the Directional Drilling Department of Eastman Whipstock, Inc. did on the days of 12-6, 1976 thru _____, 19____ conduct or supervise the taking of a Multiple Shot Survey by the method of Magnetic Oriented Survey from a depth of 3000 feet to 6779 feet, with records of inclination being taken at approximately every 92 feet.

This survey was conducted at the request of Gulf Energy and Minerals U.S. for their Central Drinkard Unit Well No. 420, Lea county, State of New Mexico, in the _____ field.

Ray Warner

STATE OF TEXAS
COUNTY OF MIDLAND

Before me, the undersigned authority, on this day personally appeared Ray Warner, 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 the same is a true and correct statement of facts therein recited.

Subscribed and sworn to before me on this 11th day of December, 1976.

Phyllis J. Capelano
Notary Public In and for the county of
Midland, Texas

GULF ENERGY AND MINERAL L. S.

LEA COUNTY, NEW MEXICO

CDU

NO. 420

CY20

811170-6244

11-16-75

PAGE 1

* SUBMITTED BY *

* EASTMAN-KHIPSTOCK *

* INC. *

* *****

RECORD OF SURVEY
PRO. DIRECTION 0 0

MEAS. DEPTH	COURSE LENGTH	TRUE COURSE	TRUE VERT. DEPTH	ANGLE OF INCLIN D M	COURSE DIRECTION D M	VERT. SEC.	DOG LEG STOPPER 100	RECTANGULAR COORDINATES	
0	0.	0.00	0.00	0 0	N 0 0 E	0.00	0.00	0.00	0.00
100	100.	100.00	100.00	0 15	N 56 0 E	0.00	0.25	0.19 N	0.09E
200	100.	100.00	200.00	0 15	N 6 0 E	0.00	0.21	0.55 N	0.32E
300	100.	100.00	300.00	0 0	N 0 0 E	0.00	0.25	0.77 N	0.33E
400	100.	100.00	400.00	0 0	N 0 0 E	0.00	0.02	0.77 N	0.33E
500	100.	100.00	500.00	0 0	N 0 0 E	0.00	0.02	0.77 N	0.33E
600	100.	100.00	600.00	0 15	S 64 0 W	0.00	0.25	0.59 N	0.22E
700	100.	100.00	700.00	0 15	S 1 0 E	0.00	0.26	0.24 N	0.44E
800	100.	100.00	800.00	0 15	S 4 0 W	0.00	0.03	0.20 S	0.42E
900	100.	100.00	900.00	0 15	S 57 0 E	0.00	0.22	0.56 S	0.64E

MEAS. DEPTH	COURSE LENGTH	TRUE COURSE LENGTH	TRUE VERT. DEPTH	ANGLE OF INCLIN D M	COURSE DIRECTION D M	VERT. SEC.	DOG LEG DEGREE	RECTANGULAR COORDINATES
1000	100.	100.00	999.99	0 30	S 72 0 E	0.00	0.27	0.84 S 1.22 E
1098	98.	98.00	1097.99	0 30	S 83 0 E	0.00	0.10	1.02 S 2.06 E

BOTTOM HOLE CLOSURE 2.30 FEET AT S 63 31 58 E

(METHOD OF COMPUTATION--RADIUS OF CURVATURE)

GULF ENERGY AND MINERALS U.S.
 LEA COUNTY, NEW MEXICO
 C.O.D.U.
 WELL NO. 420
 MAGNETIC MULTISHOT SURVEY
 WT1176-S0249
 NOVEMBER 19, 1976

PAGE 1

 * SUBMITTED BY *
 * EASTMAN-WHIPSTOCK *
 * INC. *
 *

RECORD OF SURVEY
 PRO. DIRECTION 0 0

MEAS. DEPTH	COURSE LENGTH	TRUE COURSE	TRUE VERT. DEPTH	ANGLE OF INCLIN		COURSE DIRECTION	VERT. SEC.	DOG LEG DEGREE	RECTANGULAR COORDINATES	
				D	M			100		
1098	0.	0.00	1098.00	0	15	S 38	0.00	0.00	1.02 S	2.13E
1154	56.	56.00	1154.00	0	45	N 3	0.00	1.01	0.57 S	2.30E
1245	91.	90.99	1244.99	0	30	N 60	0.00	0.70	0.24 N	2.80E
1337	92.	91.99	1336.99	0	45	N 48	0.00	0.31	0.83 N	3.61E
1428	91.	90.99	1427.98	0	45	N 42	0.00	0.09	1.67 N	4.45E
1520	92.	91.99	1519.97	1	0	N 56	0.00	0.36	2.59 N	5.51E
1611	91.	90.99	1610.95	1	0	S 88	0.00	0.61	2.11 N	7.00E
1703	92.	91.99	1702.94	0	45	N 48	0.00	0.70	2.62 N	8.27E
1794	91.	90.99	1793.93	1	0	N 51	0.00	0.28	3.53 N	9.33E
1886	92.	91.98	1885.91	1	30	N 32	0.00	0.70	5.02 N	10.65E

MEAS. DEPTH	COURSE LENGTH	TRUE COURSE LENGTH	TRUE VERT. DEPTH	ANGLE OF INCLIN D M	COURSE DIRECTION D M	VERT. SEC.	DOG LEG DEGPER 100	RECTANGULAR COORDINATES
1977	91.	90.96	1976.87	2 0	N 59 0 E	0.00	1.04	6.95 N 12.62E
2069	92.	91.93	2068.80	2 30	N 44 0 E	0.00	0.84	9.19 N 15.44E
2160	91.	90.91	2159.71	2 30	N 46 0 E	0.00	0.09	12.00 N 18.24E
2252	92.	91.89	2251.60	3 0	N 52 0 E	0.00	0.63	14.90 N 21.57E
2343	91.	90.85	2342.46	3 30	N 47 0 E	0.00	0.63	18.24 N 25.49E
2425	92.	91.83	2434.29	3 30	N 47 0 E	0.00	0.02	22.08 N 29.60E
2526	91.	90.84	2525.13	3 15	N 45 0 E	0.00	0.30	25.60 N 33.46E
2618	92.	91.86	2616.99	3 0	N 52 0 E	0.00	0.50	29.12 N 37.21E
2709	91.	90.88	2707.87	3 0	N 50 0 E	0.00	0.12	32.11 N 40.91E
2801	92.	91.87	2799.74	3 0	N 53 0 E	0.00	0.17	35.11 N 44.68E
2892	91.	90.89	2890.63	2 45	N 50 0 E	0.00	0.32	37.95 N 48.25E
2984	92.	91.90	2982.53	2 30	N 45 0 E	0.00	0.37	40.80 N 51.38E
3000	16.	15.98	2998.51	2 30	N 45 0 E	0.00	0.13	41.29 N 51.65E

BOTTOM HOLE CLOSURE 66.28 FEET AT N 51 27 58 E

(METHOD OF COMPUTATION--RADIUS OF CURVATURE)

 ** SUBMITTED BY **
 ** EASTMAN-KHIPPSTOCK **
 ** INC. **

RECORD OF SURVLY
PRO. DIRECTION 0 0

MEAS. DEPTH	COURSE LENGTH	TRUE COURSE	TRUE DEPTH	VERT. INCLIN	ANGLE OF DIP	COURSE DIRECTION	VERT. SEC.	DOG LEG DEGREE	REFLECTANCE		
									100	PERCENT	
3000	0.	0.00	2990.51	2 30		N 45 0 E	0.00	0.00	41.29	N	51.85E
3074	74.	73.92	3072.43	2 45		N 47 0 E	0.00	0.36	42.64	N	54.29E
3166	92.	91.85	3164.23	3 45		N 50 0 E	0.00	1.10	47.10	N	58.19E
3259	93.	92.77	3257.06	4 15		N 43 0 E	0.00	0.75	51.56	N	62.90E
3352	93.	92.66	3349.72	5 30		N 36 0 E	0.00	1.49	57.66	N	67.92E
3443	91.	90.56	3440.26	5 45		N 28 0 E	0.00	0.90	65.22	N	72.64E
3536	93.	92.47	3532.75	6 30		N 18 0 E	0.00	1.40	74.34	N	76.52E
3627	91.	90.39	3623.14	6 45		N 14 0 E	0.00	0.58	84.43	N	79.41E
3720	93.	92.31	3715.45	7 15		N 11 0 E	0.00	0.67	95.49	N	81.86E
3813	93.	92.23	3807.66	7 30		N 16 0 E	0.00	0.74	107.10	N	84.65E

MEAS. DEPTH	COURSE LENGTH	TRUE COURSE LENGTH	TRUE VERI. DEPTH	ANGLE OF INCLIN		COURSE DIRECTION	VERT. SEC.	DOG LEG DEEPER 100	RECTANGULAR COORDINATES	
				D	M				N	E
3906	93.	91.67	3699.35	11	45	N 31 0 E	0.00	5.27	121.21	90.83E
3999	93.	91.85	3990.40	11	45	N 28 0 E	0.00	0.66	137.79	100.15E
4092	93.	91.89	4031.49	11	30	N 30 0 E	0.00	0.51	154.16	109.24E
4185	93.	91.13	4172.62	11	30	N 30 0 E	0.00	0.00	170.24	118.51E
4279	94.	91.63	4264.25	14	15	N 34 0 E	0.00	3.07	188.00	129.60E
4372	93.	89.50	4353.75	17	15	N 27 0 E	0.00	3.83	209.73	142.41E
4464	92.	87.68	4441.45	16	0	N 28 0 E	0.00	0.88	234.44	155.27E
4554	90.	85.47	4526.91	13	30	N 28 0 E	0.00	0.56	259.33	168.50E
4646	92.	86.92	4615.85	19	45	N 28 0 E	0.00	1.36	285.94	182.65E
4757	91.	85.10	4699.13	21	0	N 29 0 E	0.00	1.43	313.78	197.77E
4829	92.	85.50	4784.43	23	0	N 30 0 E	0.00	2.21	343.78	214.74E
4922	93.	85.12	4869.55	24	30	N 27 0 E	0.00	2.07	376.69	232.61E
5014	92.	83.71	4953.27	24	30	N 27 0 E	0.00	0.00	410.68	249.93E
5105	91.	82.47	5035.74	25	30	N 25 0 E	0.00	1.44	445.24	266.79E
5196	91.	81.79	5117.53	26	30	N 25 0 E	0.00	1.46	481.69	283.01E
5290	94.	83.75	5201.28	27	30	N 19 0 E	0.00	2.20	521.52	298.30E
5362	92.	81.14	5282.42	26	45	N 18 0 E	0.00	1.45	562.64	312.06E
5476	94.	82.41	5364.83	26	45	N 16 0 E	0.00	1.02	605.88	325.28E
5568	92.	80.56	5445.39	29	0	N 15 0 E	0.00	0.59	646.69	337.15E
5662	94.	82.61	5527.71	28	45	N 16 0 E	0.00	0.58	692.43	349.28E

MEAS. DEPTH	COURSE LENGTH	TRUE COURSE LENGTH	TRUE VERT. DEPTH	ANGLE OF INCLIN D M	COURSE DIRECTION D M	VERT. SEC.	LOG DEC PER 100	RECTANGULAR COORDINATES
5752	90.	75.52	5500.25	29 45	N 14 0 E	0.00	1.55	734.91 N 360.66 E
5845	93.	80.64	5567.07	29 30	N 14 0 E	0.00	0.27	779.51 N 371.79 E
5939	94.	81.81	5766.89	29 30	N 14 0 E	0.00	0.02	824.42 N 382.98 E
6030	91.	78.71	5847.59	30 45	N 14 0 E	0.00	1.37	862.74 N 394.05 E
6121	91.	78.41	5926.00	30 15	N 14 0 E	0.00	0.55	913.55 N 405.21 E
6216	95.	82.17	6003.17	30 0	N 15 0 E	0.00	0.59	959.71 N 417.14 E
6307	91.	78.51	6084.86	30 45	N 14 0 E	0.00	0.99	1004.20 N 428.67 E
6397	90.	78.23	6164.91	28 30	N 15 0 E	0.00	2.56	1047.33 N 439.80 E
6490	93.	81.73	6243.64	28 30	N 15 0 E	0.00	0.00	1090.19 N 451.29 E
6581	91.	80.16	6323.80	28 0	N 15 0 E	0.00	0.55	1131.80 N 462.44 E
6680	99.	87.41	6414.21	28 0	N 15 0 E	0.00	0.00	1176.69 N 474.47 E
6779	92.	87.41	6501.62	28 0	N 15 0 E	0.00	0.00	1221.59 N 486.50 E

BOTTOM HOLE CLOSURE 1314.90 FEET AT N 21 42 53 E

(METHOD OF COMPUTATION---RADIUS OF CURVATURE)

All distances must be from the outer boundaries of the Section

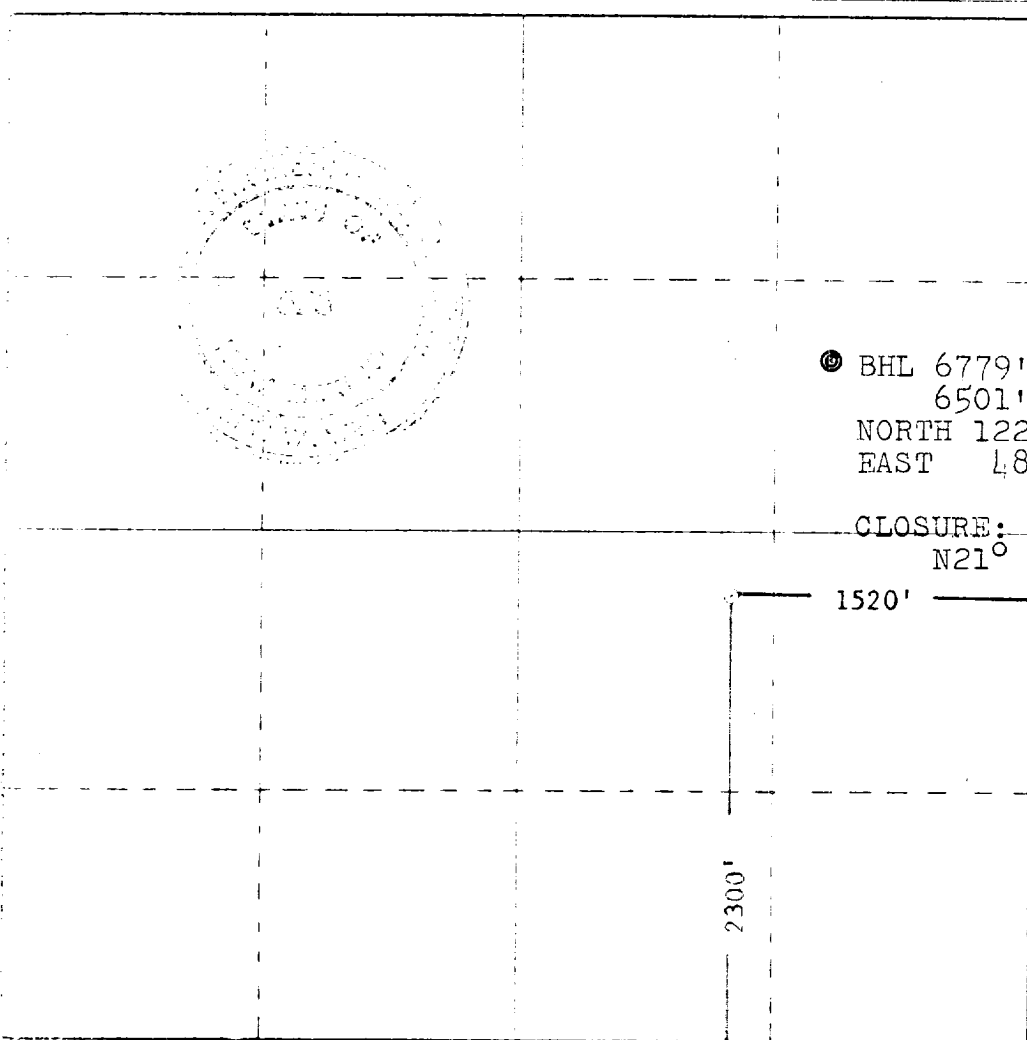
GULF OIL CORP.		Lease		CENTRAL DRINKARD UNIT		420
Section	33	Township	21 SOUTH	Range	37 EAST	County
2300		feet from the SOUTH		1520		feet from the EAST
Well Elev.	3443.4	Producing Formation		Pool		Estimated Acreage

- Outline the acreage dedicated to the subject well by colored pencil or hatchure marks on the plat below.
- If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).
- 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 _____

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 until all interests have been consolidated (by communitization, unitization, force-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name _____
Title _____

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 and belief.

Date Surveyed
SEPT. 10, 1976
Registered Professional Engineer
and/or Surveyor

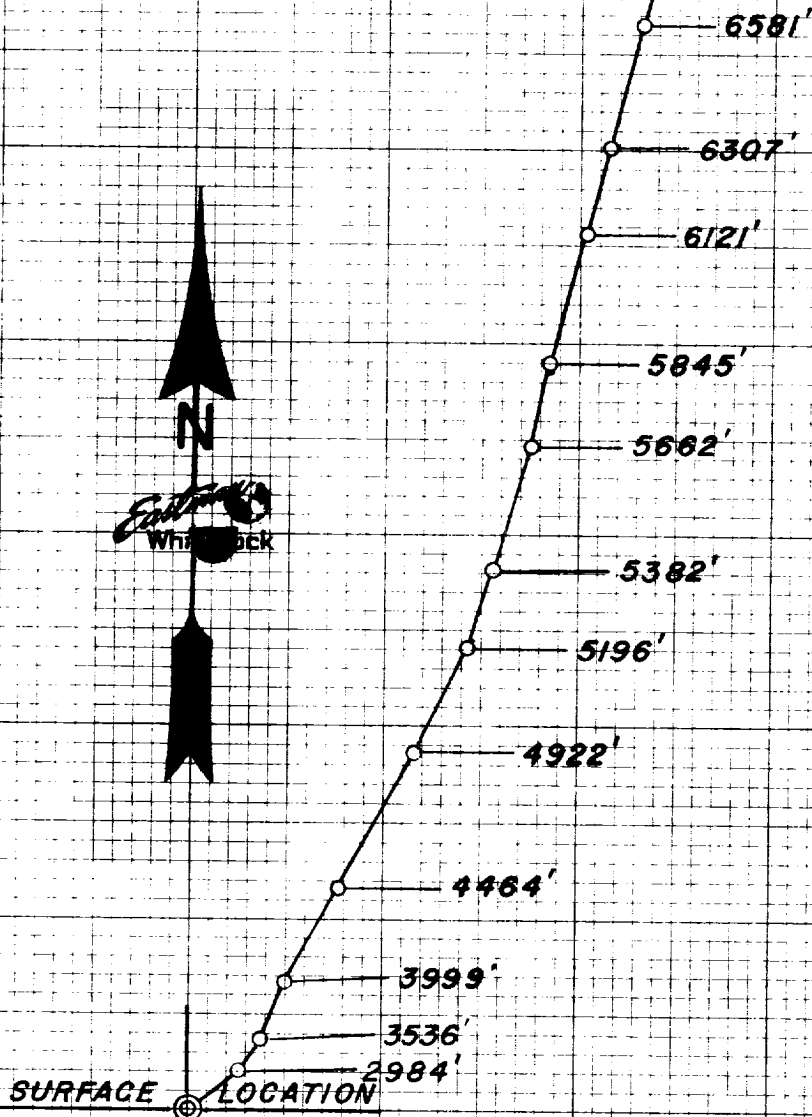
John W. West
676

GULF ENERGY AND MINERALS - U.S. CENTRAL DRINKARD UNIT NO. 420 LEA CO., NEW MEXICO

WT1176-S0249

WT1276-S0270

6779' M.D. 6501.62' T.V.D.
NORTH 1221.59'
EAST 486.50'
CLOSURE 1314.90'-
N21°43'E



COUNTY	LEA	FIELD	Drinkard	STATE	NM
OPR	Gulf Oil Corp.			API	30-025-25387
NO	420	LEASE	Central Drinkard Unit	SERIAL	2-1-37 NM
Sec 30, T28S, R37E				MAP	
2300' PSL, 1320' FEL of Sec				CO-ORD	
Enclave Township				ELEV	LBS
SPD	11-15-76	CMP	1-9-77	WELL CLASS:	INT. D
CSG				FIN	DC
			FORMATION	DATUM	FORMATION
			TD	6779' (DRKD)	PBD
					6757'
IP (Drinkard) Perfs 6584-6627' F 369 MCF/GPD. GOR 284,500, Gty					
1.6, IP 275#					
CONTR	M.F.	OPR'S ELEV	3493' GL, 3504' KB	PD	6765' RE

F.R. 2-20-76
(Drinkard)
11-29-76 Drlg 5230' 1m
12-7-76 Drlg 6779' 1m
12-10-76 ID 6779'; Fsg
12-29-76 ID 6779'; PBD 6757'; Istg
Perf (Drinkard) 6584-86', 6625-27' w/2 SPF
Acid (6584-6627') 1500 gals
Pres (6584-6627') 11,000 gals + 22,000# sd
1-10-77 ID 6779'; PBD 6757'; SI
Flwd 522 MCF/GPD (6584-6627')
1-18-77 ID 6779'; PBD 6757'; SI
1-24-77 ID 6779'; PBD 6757'; WO Pot
1-31-77 ID 6779'; PBD 6757'; Complete
LOG ICPS: Salt 1240', Yates 2564', Seven Rivers

2-1-37 NM

LEA
GULF OIL CORP.

Drinkard
420 Central Drinkard Unit
Sec 33, T21S, R37E

NM
Page 2

1-31-77

Continued

2794', Queen 3320', Grayburg 3620', San Andres
3851', Glorieta 5110', Blinbry 5486', Tubb
6196', Drinkard 6570'

2-5-77

COMPLETION ISSUED

IC 30-025-70170-76
2-1-37 NM