



**REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY**

H.L. Brown
COMPANY

Shell State Well No. 1
WELL NAME

Lea County, New Mexico
LOCATION

JOB NUMBER
WT0183-G0117

TYPE OF SURVEY
Gyroscopic Multi Shot Survey

DATE
1/28/83

SURVEY BY
Troy Oney

OFFICE
West Texas

H.L. BROWN

SHELL STATE WELL NO. 1

LEA COUNTY, NEW MEXICO

BD1-358

JANUARY 28, 1983

EASTMAN SHIPSTOCK, INC.

GYROSCOPIC MULTI SHOT SURVEY

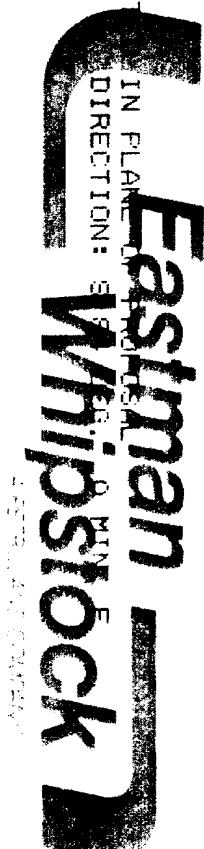
WT0183-G0117

SURVEYOR: TROY ONEY

(9435'-12629')

TIE-IN INFORMATION AT DEPTH OF 9435' IS FROM SPERRY-SUN
GYROSCOPIC SURVEY. (11-24-82)

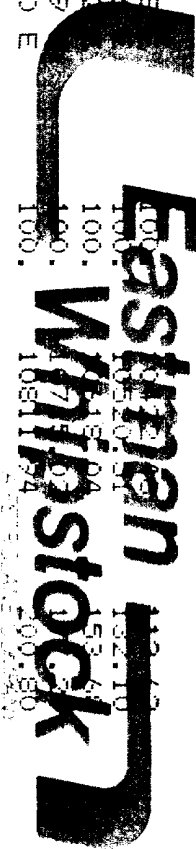
VERTICAL SECTION CALCULATION



RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

MEASURED DEPTH	DRIFT ANGLE	DRIFT DIRECTION	COURSE LENGTH	TRUE VERTICAL DEPTH	VERTICAL SECTION	RECTANGULAR C.O.D. IN FEET	DOGLEG SEVERITY
FEET	D M	D	FEET	FEET	FEET	FEET	DG/100FT
9435.	1 30	S 54 E	0.	9434.85	10.31	2.59 S	10.09 E
9529.	1 30	S 66 E	94.	9528.82	12.55	3.82 S	12.22 E
9629.	2 45	S 75 E	100.	9628.75	16.15	5.05 S	15.71 E
9729.	5 15	S 88 E	100.	9728.50	23.10	6.08 S	22.59 E
9829.	6 0	S 86 E	100.	9828.01	32.89	6.60 S	32.38 E
9929.	6 30	S 89 E	100.	9927.42	43.76	7.07 S	43.26 E
10029.	6 45	N 90 E	100.	10026.75	55.24	7.17 S	54.79 E
10129.	7 30	N 89 E	100.	10125.98	67.57	7.06 S	67.20 E
10229.	8 0	N 89 E	100.	10225.06	80.95	6.83 S	80.68 E
10329.	9 0	N 89 E	100.	10323.96	95.62	6.57 S	95.46 E
10429.	10 45	N 88 E	100.	10423.01	108.69	6.12 S	112.60 E
10529.	12 0	N 84 E	100.	10520.51	132.10	5.09 S	132.29 E
10629.	13 30	N 81 E	100.	10618.04	153.44	2.78 S	154.24 E
10729.	14 45	N 79 E	100.	10715.07	174.07	1.24 N	178.30 E
10829.	13 45	N 80 E	100.	10811.94	200.80	5.73 N	202.51 E
10929.	11 45	N 84 E	100.	10909.47	222.21	8.80 N	224.36 E
11029.	11 45	N 89 E	100.	11007.37	242.29	10.04 N	244.68 E
11129.	12 0	N 89 E	100.	11105.23	262.71	10.40 N	265.25 E
11229.	12 0	N 82 E	100.	11203.05	283.35	10.77 N	286.04 E
11329.	12 45	N 87 E	100.	11300.72	304.57	11.51 N	307.46 E
11429.	13 0	N 87 E	100.	11398.21	326.58	12.68 N	329.71 E
11529.	14 0	N 86 E	100.	11495.45	349.60	14.10 N	353.01 E
11629.	15 0	N 85 E	100.	11592.26	374.22	16.07 N	377.97 E
11729.	15 30	N 86 E	100.	11688.74	400.08	18.13 N	404.19 E
11829.	16 0	N 87 E	100.	11784.98	426.85	19.79 N	431.28 E
11929.	16 15	N 87 E	100.	11881.05	454.29	21.24 N	459.02 E
12029.	16 0	N 86 E	100.	11977.11	481.68	22.94 N	486.74 E
12129.	14 45	N 89 E	100.	12073.53	507.90	24.10 N	513.23 E
12229.	13 0	S 89 E	100.	12170.61	531.74	24.10 N	537.21 E
12329.	12 0	S 85 E	100.	12268.24	553.35	22.96 N	558.81 E



H.L. BROWN
SHELL STATE WELL NO. 1
LEA COUNTY, NEW MEXICO

BD1-358

COMPUTATION
TIME DATE
15:23:23 28-FEB-83

PAGE NO. 2

MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	COURSE LENGTH FEET	TRUE VERTICAL DEPTH FEET	VERTICAL SECTION FEET	RECTANGULAR COORDINATES	DOGLEG SEVERITY DG/100FT
12429.	11 0	S 85 E	100.	12366.23	573.29	21.23 N 578.68 E	1.00
12529.	9 15	S 84 E	100.	12464.67	590.87	19.54 N 596.17 E	1.76
12629.	7 30	S 82 E	100.	12563.60	605.43	17.77 N 610.63 E	1.77
FINAL CLOSURE - DIRECTION: N 88 DEGS 20 MINS E							
DISTANCE: 610.89 FEET							



H. L. BROWN
SHELL STATE
LEE COUNTY,
WELL NO. 1
NEW MEXICO

SCALE 1 IN. = 50 FEET
LEFT IN LATCH: 100

$$\begin{aligned} & \mathbf{v} = \mathbf{v}(\mathbf{r}, t) \\ & \mathbf{v} = \mathbf{v}(\mathbf{r}, t) \end{aligned}$$

100

10

[illegible]



P. O. Box 5577/Midland, Texas 79704/(915) 563-0511

SURVEY CERTIFICATE NUMBER

STATE OF TEXAS
COUNTY OF MIDLAND

I, Troy Oney in the employ of Eastman
Whipstock, Inc. did on the days of 1-28, 1983 thru
1-29, 1983 conduct or supervise the taking of a
Gyroscopic Multi Shot survey by the method of magnetic orientation
from a depth of 9435 feet to 12629 feet, with recordings of
inclination and direction being obtained at approximate intervals of
100 feet.

This survey was conducted at the request of H.L. Brown
for their Shell State Well No. 1 Lea County,
State of New Mexico in the field.

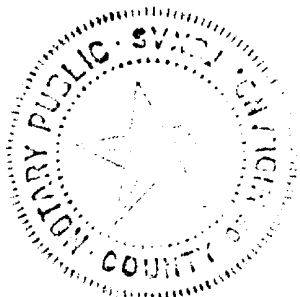
The data for this survey and the calculations were obtained and per-
formed by me according to standards and procedures as set forth by Eastman
Whipstock, Inc. and is true and correct to the best of my knowledge.

Troy Oney
DIRECTIONAL SUPERVISOR/SURVEYOR

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

Ray D. Steinke
Before me, the undersigned authority, on the day personally appeared
Troy Oney, known to me to be the person whose name
is subscribed to the 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 28TH day of
FEB., 1983.



Ray D. Steinke
Notary Public in and for the County
Midland, Texas
My commission expires 7/9/85

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

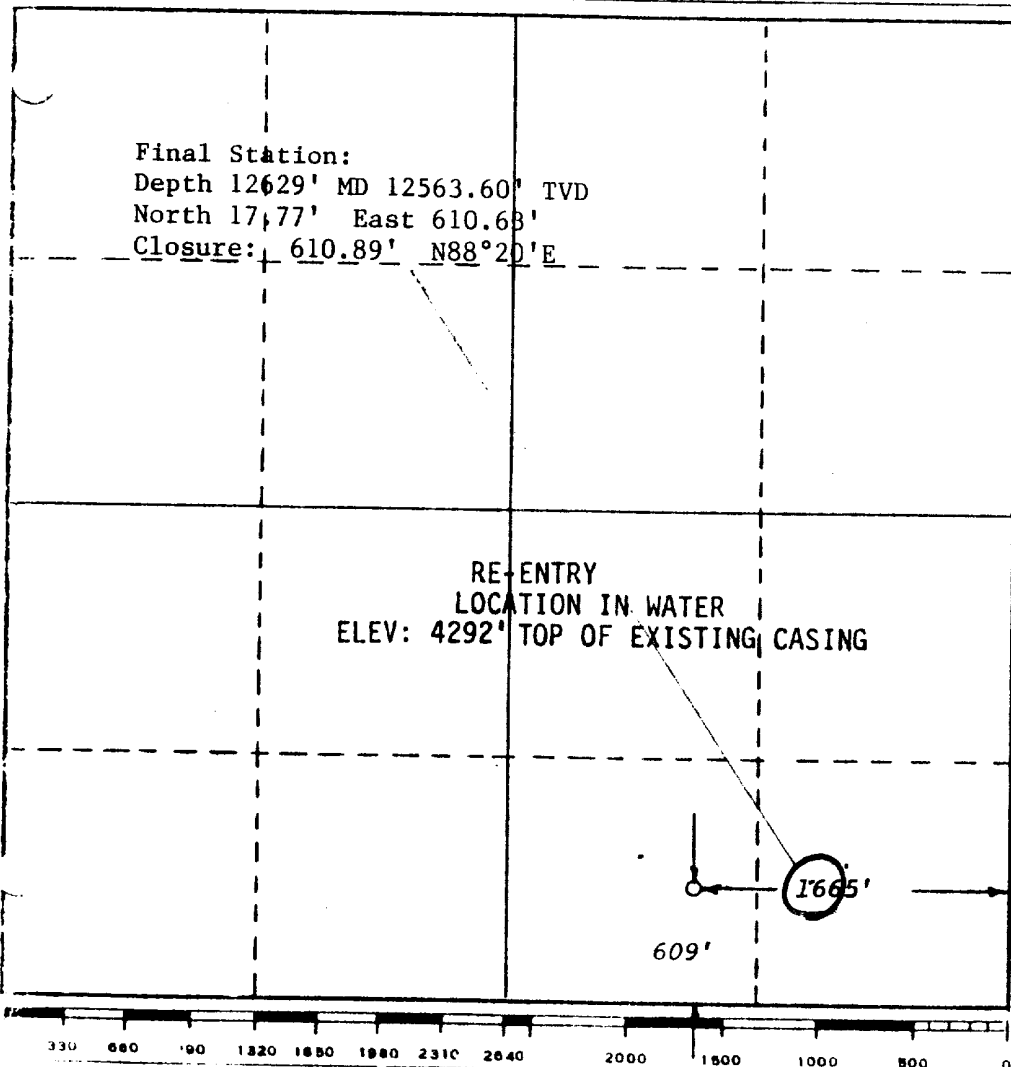
Operator H.L. BROWN, JR.		Lease SHELL STATE		Well No. 1	
Plot Letter O	Section 32	Township T-15-S	Range R-32-E	County LEA	
Actual Footage Location of Well:					
609 feet from the SOUTH		Line and 1665		feet from the EAST	
and Level Elev.	Producing Formation	Pool	Dedicated Acreage:		Acres

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 _____

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, forced-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

Position

Company

Date

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.

December 1, 1981

Date Surveyed

Gary D. Boswell

Registered Professional Engineer and/or Land Surveyor

Gary D. Boswell
Certificate No.

6689



**REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY**

H.L. BROWN

COMPANY

SHELL STATE WELL NO. 1

WELL NAME

LEA COUNTY, NEW MEXICO

LOCATION

JOB NUMBER

WT0183-S0110

TYPE OF SURVEY

MAGNETIC MULTISHOT SURVEY

DATE

01/10/83

SURVEY BY
GARY DESPAIN

OFFICE
WEST TEXAS

H. L. BROWN

SHELL STATE WELL NO. 1

LEA COUNTY, NEW MEXICO BD1-343

JANUARY 10, 1983

EASTMAN WHIPSTOCK, INC.

SPEERY SUN SURVEY (0-9435')

MAGNETIC MULTISHOT SURVEY W10183-S0110

SURVEYOR: GARY DESPAIN (9435'-12,272')

VERTICAL SECTION CALCULATED IN PLANE OF DEPOSIT
DIRECTION: S 84 DEG. 0 MIN. E

**Eastman
Whipstock**

RECORD OF SURVEY

RADIUS OF CURVATURE METHOD

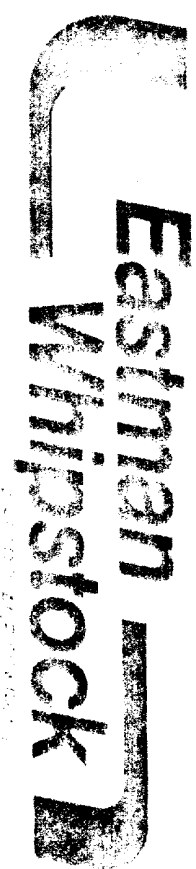
I. L. BROWN
HELL STATE WELL NO. 1
SEA COUNTY, NEW MEXICO

BD1-343

COMPUTATION PAGE NO. 1
TIME DATE
09:18:22 11-JAN-83

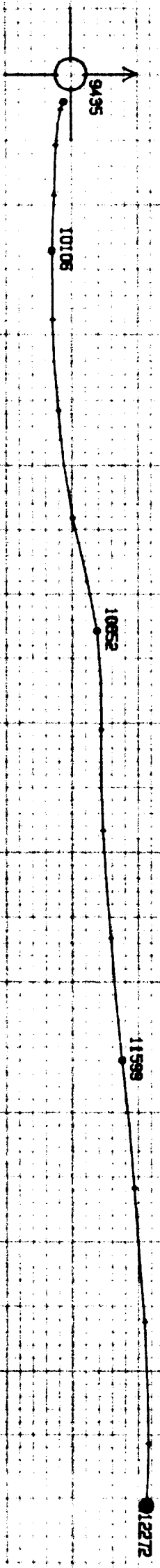
TRUE									
MEASURED DEPTH FEET	DRIFT ANGLE D M	DRIFT DIRECTION D	COURSE LENGTH FEET	VERTICAL DEPTH FEET	VERTICAL SECTION FEET	R E C T A N G U L A R C O O R D I N A T E S FEET	D G L E G SEVERITY DG/100FT		
9435.	1 30	S 54 E	0.	9434.85	10.71	2.82 S 10.47 E	0.00		
9452.	1 30	S 65 E	17.	9451.84	11.11	3.05 S 10.85 E	1.69		
9546.	1 45	S 78 E	94.	9545.81	13.71	3.89 S 13.38 E	0.47		
9639.	5 0	S 79 E	93.	9638.63	19.16	4.98 S 18.74 E	3.50		
9732.	5 30	S 88 E	93.	9731.24	27.66	5.94 S 27.19 E	1.03		
9826.	6 0	S 88 E	94.	9824.77	37.05	6.27 S 36.60 E	0.53		
9919.	6 15	S 89 E	93.	9917.24	46.95	6.53 S 46.52 E	0.29		
10012.	6 30	S 85 E	93.	10009.66	57.26	7.07 S 56.83 E	0.55		
10106.	7 15	N 88 E	10102.98	68.47	7.37 S 68.07 E	1.19	1.19		
10199.	8 15	N 89 E	73.	10196.13	80.80	7.04 S 80.61 E	1.08		
10292.	9 0	S 89 E	93.	10287.08	94.71	7.04 S 94.55 E	0.87		
10386.	10 45	N 85 E	94.	10372.68	106.73	6.48 S 110.65 E	2.16		
10479.	12 0	N 85 E	93.	10470.86	128.73	4.88 S 128.93 E	1.34		
10572.	13 0	N 84 E	93.	10561.65	148.45	2.95 S 148.96 E	1.10		
10666.	14 30	N 78 E	94.	10652.95	170.02	0.55 N 171.02 E	2.20		
10759.	14 15	N 76 E	93.	10743.04	191.86	5.74 N 193.52 E	0.60		
10852.	12 30	N 83 E	93.	10833.52	212.47	9.66 N 214.65 E	2.56		
10946.	11 30	N 88 E	94.	10925.46	231.68	11.19 N 234.13 E	1.53		
11039.	12 0	S 89 E	93.	11016.51	250.50	11.36 N 253.07 E	0.85		
11132.	12 0	N 89 E	93.	11107.48	269.72	11.36 N 272.40 E	0.45		
11225.	12 30	N 87 E	93.	11198.36	289.26	12.04 N 292.12 E	0.71		
11319.	12 45	N 86 E	94.	11290.09	309.53	13.30 N 312.63 E	0.35		
11412.	13 30	N 85 E	93.	11380.66	330.29	14.96 N 333.68 E	0.84		
11505.	14 45	N 86 E	93.	11470.85	352.61	16.74 N 356.31 E	1.37		
11599.	15 15	N 83 E	94.	11561.64	376.44	19.07 N 380.52 E	0.96		
11692.	15 15	N 84 E	93.	11651.37	400.33	21.84 N 404.83 E	0.28		
11785.	16 0	N 87 E	93.	11740.93	424.95	23.80 N 429.79 E	1.19		
11879.	16 15	N 85 E	94.	11831.23	450.66	25.62 N 455.84 E	0.65		
11972.	16 0	N 86 E	93.	11920.57	476.06	27.65 N 481.59 E	0.40		
12065.	14 45	N 89 E	93.	12010.24	500.44	28.72 N 506.22 E	1.59		

TRUE									
MEASURED	DRIFT	DRIFT	COURSE	VERTICAL	VERTICAL	RECTANGULAR	DOGLEG		
DEPTH	ANGLE	DIRECTION	LENGTH	DEPTH	SECTION	COORDINATES	SEVERITY		
FEET	D M	D	FEET	FEET	FEET	FEET	DG/100FT		
12159.	13 15	N 89 E	94.	12101.45	523.01	29.12 N 528.95 E	1.60		
12252.	12 15	S 86 E	93.	12192.15	543.47	28.58 N 549.47 E	1.60		
12272.	12 0	S 87 E	20.	12211.71	547.66	28.33 N 553.66 E	1.63		
FINAL CLOSURE - DIRECTION: N 87 DEGS 4 MINS E									
DISTANCE: 554.38 FEET									



H. L. BROWN
SHELL STATE WELL NO. 1
LEA COUNTY, NEW MEXICO
ERSTMAN WHIPSTOCK, INC.

HORIZONTAL PROJECTION
SCALE 1 IN. = 50 FEET
DEPTH INDICATOR: MD



FINAL STATION:
DEPTH 12272 MD. 12211.70 TVD
NORTH 28.32 EAST 553.65
CLOSURE 554.98 N 87.4 16 E



P. O. Box 5577/Midland, Texas 79704/(915) 563-0511

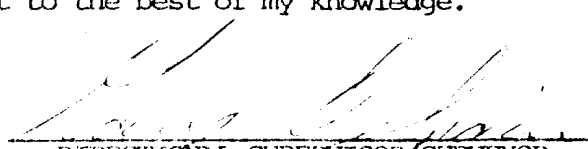
SURVEY CERTIFICATION SHEET

STATE OF TEXAS
COUNTY OF MIDLAND

I, GARY DESPAIN in the employ of Eastman Whipstock, Inc. did on the days of JANUARY 10, 1983 thru JANUARY 10, 1983 conduct or supervise the taking of a MAGNETIC MULTISHOT survey by the method of magnetic orientation from a depth of 9435 feet to 12272 feet, with recordings of inclination and direction being obtained at approximate intervals of 94 feet.

This survey was conducted at the request of H.L. BROWN for their SHELL STATE WELL NO. 1, LEA County, State of NEW MEXICO, in the field.

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


DIRECTIONAL SUPERVISOR/SURVEYOR

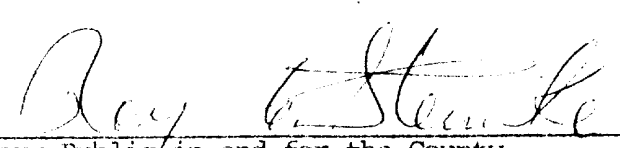
The data for this survey has been examined by me and conforms to principles and procedures set forth by Eastman whipstock, Inc.



Before me, the undersigned authority, on the day personally appeared GARY DESPAIN, known to me to be the person whose name is subscribed to the 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 11TH day of JAN, 1983.

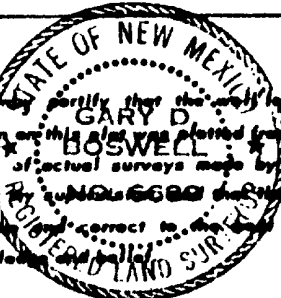



Notary Public in and for the County
Midland, Texas
My commission expires 7/9/85

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

Operator H.L. BROWN, JR.										Lease SHELL STATE										Well No. 1																													
Field Letter O										Section 32										Township T-15-S										Range R-32-E										County LEA									
Initial Footage Location of Well:																																																	
609										feet from the SOUTH										line and 1665										feet from the EAST										line									
Land Elevation										Producing Formation										Pool										Dedicated Acreage:										Acres									

- No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-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	
Position	
Company	
Date	
I hereby certify that the work location shown on this plan 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.	
	
December 1, 1981	
Date Surveyed	
Gary D. Boswell	
Registered Professional Engineer and/or Land Surveyor	
<i>Gary D. Boswell</i>	
Certificate No.	
6688	



Petroleum Information

RE-ISSUED COMPLETION

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COUNTY LEA Anderson Ranch STATE NM
 OPER BROWN H L JR API 30-025-22285
 NO 1 Shell State MAP
 Sec 32, T15S, R32E CO-ORD
 609 FSL, 1665 FEL of Sec 7-1-28 NM
 29 mi S/Caprock Respd 11-21-82 REG MP *10-7-85

13 3/8-400-370 SX
 8 5/8-3500-750 SX
 5 1/2-12,700-525 SX

WELL CLASS: INIT		DDFIN	*D	LSE CODE
FORMATION	DATUM	FORMATION	DATUM	
TD 12,700 (WEMP)			PBD	

*DRY & ABANDONED

COMP Sierra Drilg #2 OPER FILE 4285 GR, *4303 KB SURV 17

F.R. 1-11-82 OWDD
 PD 12,300 RT (Morrow)
 (Old records show 495 FSL, 1650 FEL of Sec;
 well resurveyed & loc corrected to the above)
 (Orig. King Resources, D&A 11-21-67, OTD 9900)

12-1-82 TD 9900; Rmg 9571
 12-8-82 Drlg 9950
 12-16-82 TD 10,195; Stuck DP
 12-22-82 Drlg 10,802
 12-28-82 Drlg 11,125
 1-4-83 Drlg 11,743
 1-6-83 Drlg 11,936
 1-17-83 Drlg 12,472

1-25-83 TD 12,700; WOCT
 Deepened 9900 to 12,700
 DST Tight
 *No Cores
 Ran 5 1/2 Csg

7-1-78 NM

LEA
BROWN H L JR

Anderson Ranch
1 Shell State
Sec 32, T15S, R32E

NM
Page #2

3-3-83 TD 12,700; Prep DOC
3-7-83 TD 12,700; DOC @ 12,637
3-14-83 TD 12,700; Fsg
4-4-83 TD 12,700; SI Eval
*Lost DC in hole
*10-7-83 TD 12,700; Dry & Abandoned
*Will re-issue when additional information
becomes available
Rig Released 1-23-83

*Denotes changes & additions

7-2-83 TEMPORARY COMPLETION ISSUED
10-12-85 RE-ISSUE OF SUSPENDED COMPLETION

7-1-28 NM
IC 10-025-70001-82

COUNTY	LEA	FIELD	Anderson Ranch	STATE	NM
OPR	KING RESOURCES CO.				MAP
	1 Shell-State				
	Sec. 32, T-15-S, R-32-E				CO-ORD
	495' FSL, 1650' FEL of Sec.				30-025-22283
	Spd 10-20-67				
	Cmp 11-21-67				
		CLASS		EL	
	FORMATION	DATUM	FORMATION	DATUM	
CSG & SX - TUBING					
13 3/8" 400' 370					
8 5/8" 3500'					
LOGS EL GR RA IND HC A					
	TD 9900'				
PLUGGED & ABANDONED					

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CONT. Moran
DATE
PROP DEPTH 10,000' TYPE KB

F.R. 10-19-67; Elev. 4298' KB
PD 10,000' - Wolfcamp
Contr. - Moran
10-24-67 Drlg. 3115'.
10-25-67 TD 3500', prep run 8 5/8" casing.
10-30-67 Drlg. 5400'.
11-6-67 Drlg. 7300'.
11-13-67 Drlg. 9594'.
11-20-67 TD 9900', prep P&A.
DST 9775-9860', open 2 hrs 30 mins,
GIS 5 mins,
circ out 20 B GCM + 120' HOSSCM,
1 hr ISIP 1698#, FE 46-46#,
2 hr FSIP 1698#.

LEA Anderson Ranch NM
KING RESOURCES CO., #1 Shell-State

Sec. 32-15S-32E

Page #2

11-27-67 TD 9900', PLUGGED & ABANDONED

12-4-67 TD 9900', COMPLETION REPORTED

LOG: Anhy 1268', Yates 2485', SA 4051',
Glor 5645', Abo 7490', Wolfcamp 8890'.