

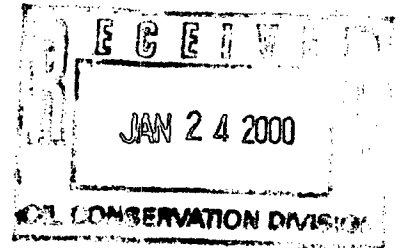
JAMES BRUCE

ATTORNEY AT LAW

POST OFFICE BOX 1056
SANTA FE, NEW MEXICO 87504

3304 CAMINO LISA
SANTA FE, NEW MEXICO 87501

(505) 982-2043
(505) 982-2151 (FAX)



January 21, 2000

Via Fax and U.S. Mail

Michael E. Stogner
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505

Re: Application of Manzano Oil Corporation for administrative
approval of an unorthodox oil well location:

Cayuma Well No. 1-A
3580 feet FSL & 990 feet FWL
Lots 12 and 13 of Irregular Section 1, Township 16
South, Range 36 East, NMPPM
Lea County, New Mexico

Dear Mr. Stogner:

Enclosed are wellbore sketches, together with additional
information on the drilling of the original directional well and
the proposed plans for the new well.

Very truly yours,

A handwritten signature in cursive script that reads "James Bruce".

James Bruce

Attorney for Manzano
Oil Corporation

3580' FSL & 990' FWL

Plugs

Surface

Concho Resources, Inc.
Cayuma Well No. 1

412-512'

13-3/8"

460 sx circ.

2010-2110'

4290-4390'

8-5/8"

1200 sx inside 13-3/8"

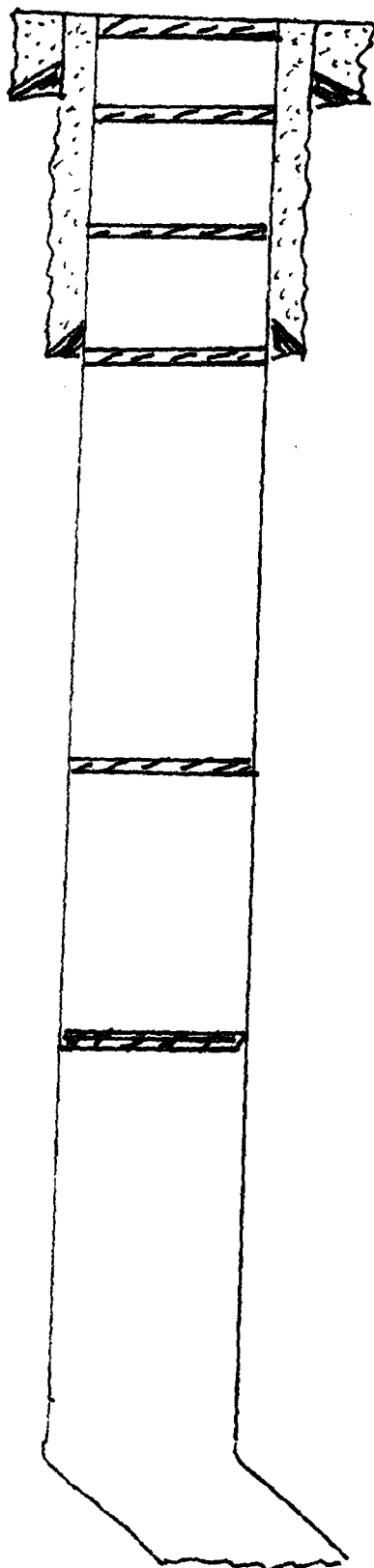
6290-6390'

8420-8520'

10,912' (See attached drilling
plan and survey)

11,608' TVD

3175' FSL & 743' FWL

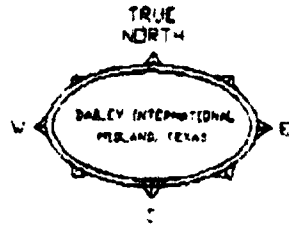


29-99 13:33
02/04/1999 13:46

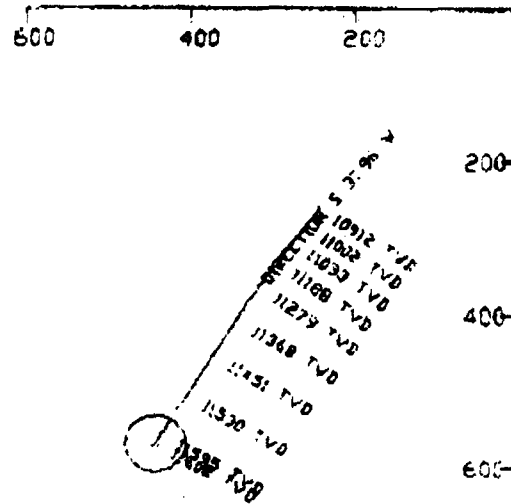
Bahlburg Exploration, Inc. 972-867-6745
9150815308

P.02

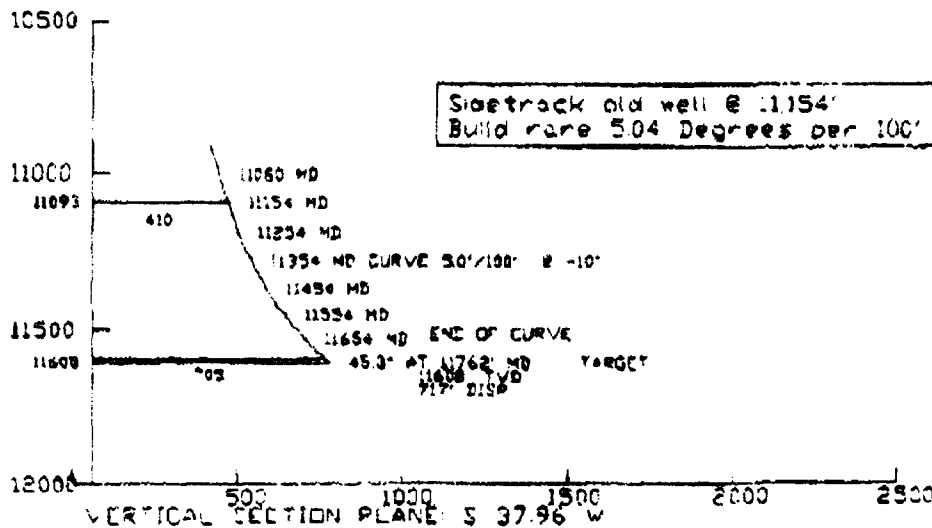
CONCHO RESOURCES
CAYUMA #1
LEA COUNTY, NEW MEXICO



HORIZONTAL PLAN
SCALE: 200 FEET/DIVISION
REFERENCE: WELL HEAD



VERTICAL SECTION
SCALE: 500 FEET/DIVISION
REFERENCE: WELL HEAD



Drawn by: D. Rodgers

File: concho.dat Thu Apr 29 1999

DAILEY INTERNATIONAL INC.

CONCHO RESOURCES
CATRINA NO 1
LEA COUNTY NEW MEXICO
OO REP JIM EVANS

Calculated by Minimum Curvature Method
Vert Sect Plane: S 40.57 W

- RECORD OF SURVEY -

ORIGINAL
100% OFF
060791

MEASURED DEPTH (FT)	INCL ANGLE (DEG)	D R I F T DIRECTION (DEG)	COURSE LENGTH (FT)	TRUE VERTICAL DEPTH	TOTAL RECTANGULAR COORDINATES (FT)		VERTICAL SECTION (FT)	CLOSE DISTANCE (FT)		ROGUE SEVERITY (DE/100')
9330.00	0.76	S 44.59 W	0.00	9329.40	56.01 N	30.05 W	-22.16	63.94 N 20.85 W	0.00	
9378.00	1.00	S 37.00 W	48.00	9377.39	55.44 N	31.93 W	-21.72	63.66 N 29.47 W	0.52	
9471.00	4.20	S 20.90 W	93.00	9470.29	51.61 N	33.04 W	-17.70	61.28 N 32.62 W	3.50	
9565.00	5.30	S 25.70 W	94.00	9563.96	44.48 N	36.15 W	-10.26	57.32 N 39.10 W	1.26	
9657.00	7.90	S 23.00 W	92.00	9655.35	36.83 N	40.46 W	-0.13	53.39 N 49.27 W	2.86	
9793.00	10.70	S 31.80 W	94.00	9790.11	21.17 N	47.58 W	14.66	52.20 N 65.72 W	1.33	
9846.00	12.30	S 35.50 W	95.00	9841.20	5.71 N	50.11 W	33.45	50.39 N 84.37 W	1.85	
9937.00	14.90	S 36.10 W	91.00	9929.64	11.61 S	70.63 W	56.78	71.50 S 80.46 W	2.86	
10032.00	16.70	S 35.50 W	95.00	10021.04	32.60 S	83.76 W	80.55	91.74 S 69.39 W	1.90	
10126.00	16.30	S 35.20 W	94.00	10111.17	54.37 S	101.20 W	107.14	114.88 S 61.75 W	0.44	
10228.00	16.70	S 34.60 W	92.00	10219.38	75.80 S	116.15 W	133.11	138.70 S 56.87 W	0.47	
10312.00	15.80	S 37.00 W	94.00	10289.63	97.14 S	131.52 W	159.34	163.51 S 53.55 W	1.19	
10404.00	18.10	S 34.60 W	92.00	10377.63	118.91 S	147.18 W	186.06	189.21 S 51.06 W	2.61	
10499.00	17.40	S 34.90 W	95.00	10468.11	142.71 S	161.68 W	214.87	217.16 S 48.82 W	0.74	
10593.00	17.30	S 34.80 W	94.00	10557.83	165.71 S	179.70 W	242.76	244.44 S 47.32 W	0.21	
10687.00	18.40	S 35.20 W	94.00	10647.30	189.31 S	196.21 W	271.44	272.66 S 46.03 W	1.16	
10781.00	18.50	S 34.50 W	94.00	10736.47	213.72 S	213.23 W	302.04	301.90 S 44.93 W	0.26	
10873.00	17.50	S 33.40 W	92.00	10823.97	237.30 S	229.11 W	329.27	329.86 S 43.99 W	1.15	
10965.00	18.10	S 33.40 W	92.00	10911.56	260.78 S	244.59 W	357.18	357.54 S 43.17 W	0.65	
11060.00	16.60	S 31.00 W	95.00	11002.24	284.48 S	260.11 W	385.27	385.47 S 43.44 W	1.88	
11154.00	15.70	S 37.80 W	94.00	11092.53	305.80 S	275.22 W	411.29	411.41 S 41.99 W	1.71	
11247.00	13.10	S 34.40 W	93.00	11182.84	324.19 S	289.63 W	434.62	434.72 S 41.78 W	2.48	
11341.00	11.90	S 37.30 W	94.00	11274.26	340.63 S	302.27 W	466.19	465.26 S 41.60 W	1.62	
11373.00	11.90	S 38.00 W	93.00	11305.87	365.66 S	306.30 W	461.78	461.84 S 41.55 W	0.45	
11489.00	11.50	S 37.00 W	116.00	11419.16	364.32 S	320.62 W	485.26	485.31 S 41.35 W	0.29	
11609.00	10.00	S 36.00 W	120.00	11537.05	382.30 S	333.94 W	507.59	507.61 S 41.14 W	1.26	
11729.00	9.00	S 35.00 W	170.00	11655.40	398.42 S	349.45 W	527.32	527.33 S 40.93 W	0.84	
11840.00	7.00	S 35.00 W	111.00	11765.32	411.07 S	354.31 W	542.69	542.69 S 40.76 W	1.80	

Survey Ref: Well Road Closure Ref: Well Road
Wed Apr 28 1999 01:39:46

Vert Sect Ref: Well Road
File: CONCHOE.DAT

Page 0

71
3580
411
3169

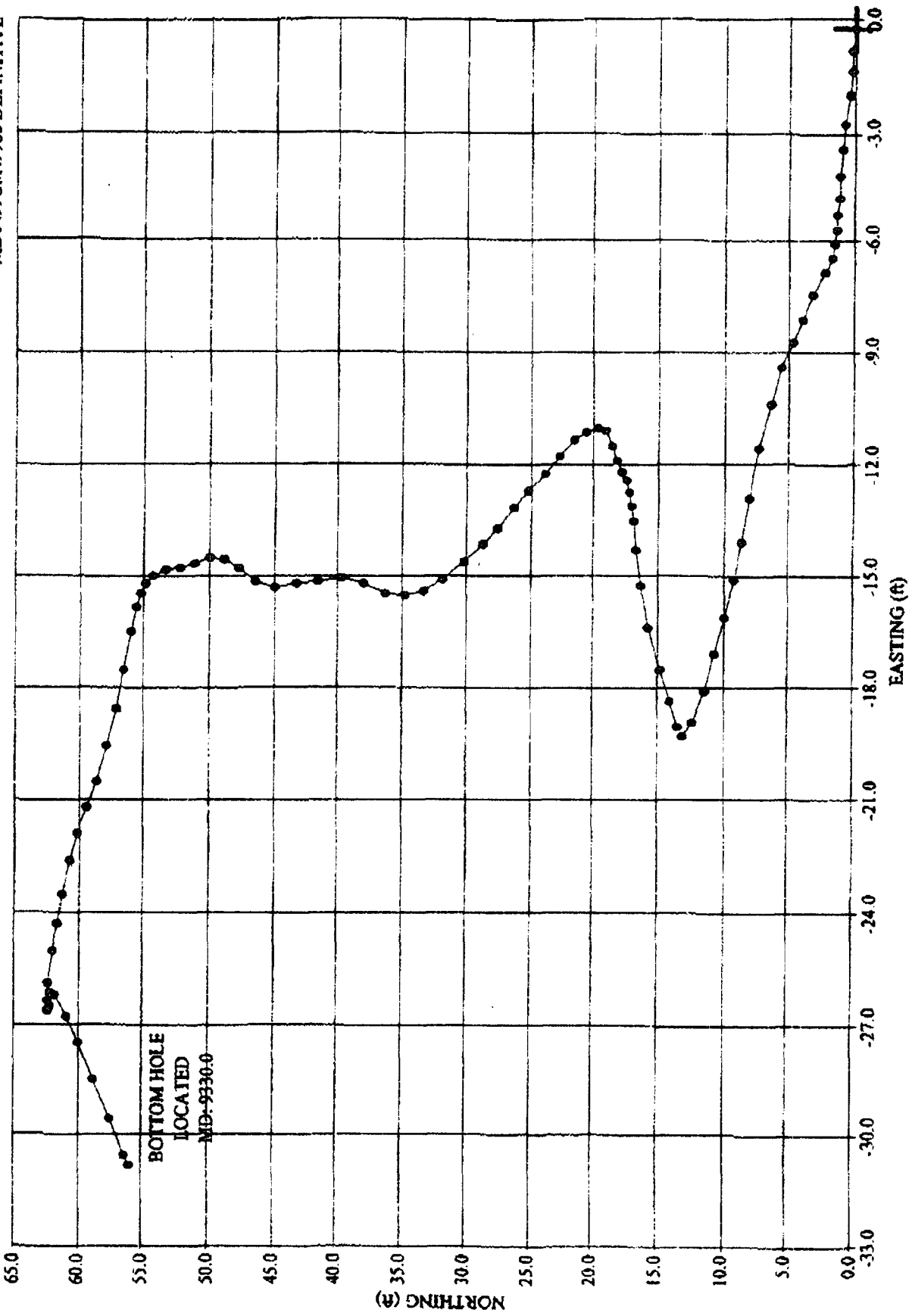
81
990
354
636

CONCHO RESOURCES

Well: CAYUMA NO. 1, Casing Size: 4-1/2" DRILLPIPE
Location: PATTERSON #6, LEA COUNTY, NEW MEXICO

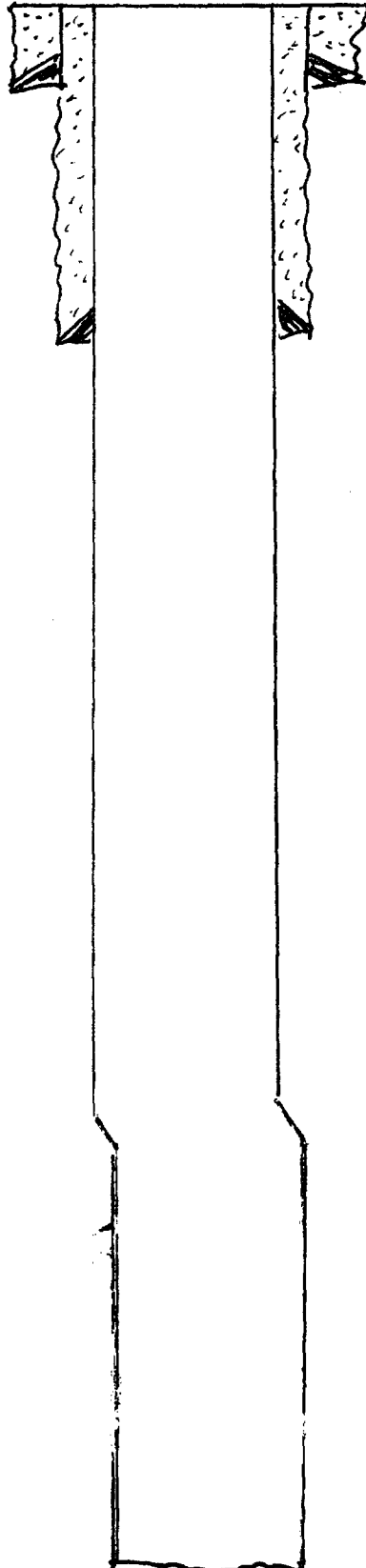
gyro/data

MD00499GMW766 DEFINITIVE



3500' FSL & 990' FWL

Manzano Oil Corp.
Cayuma Well No. 1-A



13-3/8"

8-5/8"

5-1/2" production casing
if justified

Whipstock plug at 9200-
9400 feet, dressed off to
9300

Sidetrack well and drill to
11,800' per attached procedure

P.O. BOX 2107

MANEANO OIL CORPORATION
505/623-1996
FAX 505/625-2620

ROSWELL, NM 88202-2107

DRILLING WELL PROGNOSIS

PROPERTY CODE #
API #

WELL NAME: Cayuma #1-A WILDCAT: X DEVELOPMENT WELL:
 LOCATION: 3580' FSL & 990' FNL Sec 1, T16S, R36E COUNTY: Lea
 ELEVATION: Ground Level: 3879' KELLY BUSHING: 3894'
 PROPOSED DEPTH: 11,800' NAME OF PROSPECT: Cayuma

GEOLOGICAL PROGRAM:	EXPECTED TOPS:	DEPTH	DST'S	CORES/FT
Electrical Logs:				
DIL-MCFL w/GA and	Wolfcamp	9,750'		
CNL/Density	Beta Reef	10,520'		
From TD back to	Strawn	11,610'	X	
9200'	TD	11,800'		

Well Site Geologist: Mike Brown Office: 505/623-1996 Home: 505/622-2790
 Mobile: 505/420-2641
 Mud Logging: Woodco From: 9500' To: TD Office: 505/687-2469
 Mud Loggers: Jim Wood Jr and Coly Wood Trailer Mobile: 505/361-2200

MUD PROGRAM:

Company Name: Nova Mud Mud Engineer: Ricky Rippey Office: 800/530-8786
 Home: 305/392-3470 Mobile: 505/369-8247 Joe Smith: Mobile: 505/369-7786

DEPTH	TYPE	OTHER CHARACTERISTICS
9,300 - 11,500	Fr Wtr w/Sweep	Wt 8.4 to 8.6; Vis 29-32; FL-NC
11,500 - TD	Fr Wtr Gel	Wt 8.4 to 8.9; Vis 33-38; FL-10-12 cc
		Note: Have Nitrates @ 100 ppm @ 11,500'

REENTRY PROCEDURES:

1. Rag out cellar. Weld on 8-5/8" riser and head.
2. Drill cement plugs as follows: 10 sks surface plug; 412-512'; 2010-2110'; 4290-4390'; 6290-6390'; & 8420-8520'.
3. TIX to 9400' and circel clean w/fresh wtr mud.
4. Set cement plug from 9400' back to 9200'. 125 sks Cl H. Wt 18#, Yield 0.89.
5. WOC 24 hrs. Dress off plug to 9300'. POOH.
6. TIX w/bottom hole motor. Sidetrack old hole. POOH w/motor. TIX w/7-7/8" cone-bit. Drill vertical hole. Take single shots to TD.

ENGINEERING PROGRAM:

Well Site Engineers: Ronnie Carra Home: 505/677-3454 Cellular: 505/420-2640
 Other Engineer: Van Barton Home: 505/885-1053 Cellular: 505/420-2638
 Other Engineer: John Thompson Home: 505/625-9356 Cellular: 505/420-9071
 Other Engineer: Donnie Brown Office: 505/623-1996 Home: 505/624-2318
 Cellular: 505/420-2642
 Drilling Contractor: WEK Drilg Co. Office: 505/623-5070 Shop: 505/746-2719
 Tool Pusher: Lonnie Home: 505/365-2998 Mobile: 505/748-5968
 Rig #4: Mobile: 505/748-5964
 Superintendent: Jerry Wilbanks Home: 505/457-2419 Mobile: 505/748-5970

DRILLING PROGRAM:

Casing Program:

Hole Size	Casing Size	Casing Wt/Ft	Setting Depth	Sx Cmt	Est Top
17-1/2"	13-3/8"	48#	462'	460 sks	Circel
11"	8-5/8"	32#	4,348'	1200 sks	Inside 13-3/8"
7-7/8"	5-1/2"	17 & 20#	11,800'	350 sks	300' above upper most pay

VENDORS:

Fit Lining: Akome 505/393-2910 Jack Duffey Mobile: 505/370-1245
 Trash Trailer: Jerry Wilbanks 505/748-5970 or 505/748-2328 (Ann Service)
 Dirt Work: Sweatt Const 800/536-8293 Bill's Mobile: 505/365-6807
 Water Hauling: Zia Transporte 505/393-8352; Walter Brisco Mobile: 505/631-1694
 Cement: BJ Services Hobbs: 505/392-5556 Artesia: 505/748-3140
 Casinghead: Superior Busty Allen 505/748-0134 Mobile: 505/748-5403
 Directional Drilling: Baker/Integ 913/694-9517
 Surface Owner: Gregory Milner Home: 505/396-5324 Mobile: 505/396-8171

COMMENTS:

(1) Tally out of hole to DST or run open hole logs. (2) No trash of any kind in reserve pit and burn pit. Thread protectors go in trash trailer. No cut drilg line on location. (3) Any problems with surface owner, let Van Barton negotiate.

CALL DAILY DRILLING REPORTS TO: Donnie Brown by Pusher at 7:15 a.m. @ 505/624-2318 (weekdays & weekends). If not in office - Reports to Allison Hernandez @ 505/623-1996 by 8:30 a.m. AMST

(See reverse for report requirements & directions)

Manzano Oil Corp.
Cayuma #1A
Lea County, New Mexico

Sidetrack Procedure

1. TTH with open ended drill pipe. Spot cement plug from 9400' to 9200' md +/-.
2. WOC 24 hrs. TTH with 7 7/8" bit, 6" DC's and drill pipe. Drill cement to planned KOP of 9300' md. Cement should drill no faster than 1.5 to 2 min. per ft. with 60 rpm and 8-10 K WOB to be hard enough to sidetrack.
3. TTH with an 7 7/8" D411ST diamond sidetrack bit, 6 3/4" M3 high speed motor, bent sub, NMDC, Magnetic Single Shot, and remaining drill string.
4. Orient tools and time drill with diamond bit, 1 lph, until wellbore has been sidetracked (i.e. 70% or better formation in samples). Continue drilling w WOB for a total of 45'. Circulate clean and TOH.
5. TTH with 7 7/8" tri-cone bit, 3 Drill Collars, Roller Reamer, Drill Collar, Reamer, Drill Collars, Drill Pipe to surface.

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Grande Rd., Alamo, NM 87410
District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-101
Revised February 10, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 6 Copies
Fee Lease - 5 Copies

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

Operator Name and Address: Manzano Oil Corporation P.O. Box 2107 Roswell, NM 88202-2107		OCRID Number 013954 API Number 30-025-34480
Property Code	Property Name Cayuma	Well No. 1-A

7 Surface Location

UL or lot no.	Section	Township	Range	Lot 1da	Feet from the	North/South Line	Feet from the	East/West Line	County
Lot 13	1	16S	36E		3580	South	990	West	Lea

8 Proposed Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot 1da	Feet from the	North/South Line	Feet from the	East/West Line	County
Proposed Pool 1 Northeast Lovington Penn					Proposed Pool 2				

Work Type Code E	Well Type Code O	Cable/Rotary R	Lease Type Code S	Ground Level Elevation 3879'
Multiphase No	Proposed Depth 11,800'	Formation Strawn	Contractor WEK Drilling	Spud Date 2/1/2000

9 Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Seals of Cement	Endpoint TOC
17-1/2"	13-3/8"	48#	462'	460	Circ
11"	8-5/8"	32#	4,348'	1200	Inside 13-3/8"
7-7/8"	5-1/2"	17 & 20#	11,800'	500	300' above upper most pay

10 Describe the proposed program. If this application is to DEEPEN or PLUG BACK give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

MI rotary tools. Install & tsg BOP's. Drill out surface plug and cement plugs @ 412-512'; 2010-2110'; 4290-4390'; 6290-6390' & 8420-8520'. Clean out to 9400'. Set whip-stock plug from 9400' back to 9200'. Dress-off plug. Whipstock hole and drill vertical hole to 11,800'. Run open hole logs. DST Strawn. Run 5-1/2" production if justified.

I hereby certify that the information given above is true and complete to the best of my knowledge and belief. Signature: <u>Donnie E. Brown</u>		OIL CONSERVATION DIVISION Approved by: _____ Title: _____ Approval Date: _____ Expiration Date: _____ Conditions of Approval: Attached ☐	
Printed name: <u>Donnie E. Brown</u>	Title: <u>VP Engineering</u>		
Date: <u>1/11/2000</u>	Phone: <u>(505) 623-1996</u>		