DISTRICT I
P.O. Box 1980, Hobbs, NM 88241-1980
DISTRICT II
P.O. Box Drawer DD, Artesia, NM 88211-0719
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
DISTRICT IV
P.O. Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
nergy, Minerals and Natural Resources Departme

OIL CONSERVATION DIVISION

P.O. Box 2088
Santa Fe, New Mexico 87504-2088

Form C-10
Revised February 10,199
Instructions on back
Submit to Appropriate District Offic
State Lease - 6 Copie
Fee Lease - 5 Copie
AMENDED REPORT

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

1 Operator Name and Address	2 OGRID Number
TEXACO EXPLORATION & PRODUCTION INC. 205 E. Bender, HOBBS, NM 88240	022351
	3 API Number 30-025-31707
4 Property Code 11125	5 Property Name VACUUM GLORIETA WEST UNIT
	6 Well No. 78

7 Surface Location

Ul or lot no	Section	Township	Range	Lot.Idn	Feet From The	North/South Line	Feet From The	East/West Line	County
E	36	17S	34E		2491	North	127	West	Lea

8 Proposed Bottom Hole Location If Different From Surface

Ul or lot no	Section	Township	Range	Lot.Idn	Feet From The	North/South Line	Feet From The	East/West Line	County
E/I	36/35	17S	34E		2491'/2589'	N/S	1127'/853'	W/E	LEA

9 Proposed Pool 1: VACUUM GLORIETA

10 Proposed Pool 2:

11 Work Type Code	12 WellType Code	13 Rotary or C.T.	14 Lease Type Code	15 Ground Level Elevation
P	O	ROTARY	S	4005'
16 Multiple	**17 Proposed Depth**	**18 Formation**	**19 Contractor**	**20 Spud Date**
No	6019MD	GLORIETA		8/15/00

21 Proposed Casing and Cement Program

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
NO CHANGE					

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

TEXACO INTENDS TO DRILL A DUAL HORIZONTAL RE-ENTRY IN THE SUBJECT WELL. THE PROPOSED WORK PROCEDURE IS ATTACHED.

Permit Expires 1 Year From Approval
Date Unless ~~Drilling~~ Underway
Plug-Back

23 I hereby certify that the rules and regulations of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief

Signature: J. Denise Leake

Printed Name: J. Denise Leake

Title: Engineering Assistant

Date: 7/25/00 Telephone: 397-0405

OIL CONSERVATION DIVISION

Approved By:

Title:

Approval Date: Expiration Date:

Conditions of Approval:
Attached

DeSoto/Nichols 3-94 ver 1.10

25

OVERVIEW

The Vacuum Glorieta West Unit #78 was drilled in 1992 as an injection well in the Glorieta formation. The well is currently perforated from 5796 to 5991' (195' gross, 54' net) and PBTD is 6000'. It is proposed to drill a +/-1000 foot lateral at 90 degrees and a +/-1000 foot lateral at 258.5 degrees in the Glorieta formation. The basic well plan is as follows:

a) TOOH with the Guiberson G-VI injection packer with on/off tool and 2-3/8" cement lined tubing set at 5742'. Run a 4-3/4" bit and casing scraper to 5800'. Set a 5-1/2" CIBP (see p. 6 for collars) at 5770'. Set a 5-1/2", 17.0 #/ft TIW or Smith full bore SS-WB-BB permanent packer at +/-5760' (bottom of packer). TIH with latch (1.0'), debris sub (2.55') and a 3 degree multi-lateral selective/reentry whipstock (top of window +/-5741', bottom of window +/-5747'). Attached is a correlation log from 5000'- 6016'.

b) Drill a short radius curve using a 4-3/4" bit to a measured depth of +/-6019' (TVD +/-5930'). The final angle will be 91.35 degrees from vertical. Drill +/-846' horizontal section (azimuth 90 degrees). The end point will be +/-6867' MD, +/-5910' TVD and +/-1000' vertical section.

c) Retrieve the whipstock. TIH with a latch (1'), +/-35' space out assembly (drill collars and a stabilizer), debris sub (2.55') and another 3 degree whipstock (top of window +/-5705', bottom of window +/-5711').

d) Drill a short radius curve using a 4-3/4" bit to a measure depth of +/-6022' (TVD +/-5930'). The final angle will be 87.94 degrees from vertical. Drill a +/-835' horizontal lateral (azimuth 258.5 degrees). The end point will be +/-6858' MD, +/-5960' TVD and +/-1000' vertical section.

e) Stimulate using ported subs and 20,000 gallons 15% HCl per lateral. The whipstock will be retrieved before acidizing the second lateral. Place well on injection.

50% LOST IN HOLE INSURANCE FOR THE DOWNHOLE MOTOR AND MWD IS INCLUDED WITH THE DAILY RATE FROM SCIENTIFIC DRILLING.

PROPOSED WORK

PRODUCTION HOLE:

1. TOOH with Guiberson UNI-VI packer with on/off tool, 1.43" F profile, 2-3/8" ss nipple, 177 joints 2-3/8" ICO Permian cement lined injection tubing. TIH with casing scraper to 5800'. TIH with 5-1/2" CIBP on wireline and set the CIBP at 5770'. TOOH. Pressure test the casing/CIBP to 1000 psi. TIH with a 5-1/2", 17.0#/ft Smith full bore packer on wireline and set the packer above the CIBP at +/-5760' (see p. 6 for collars). TOOH.

2. TIH with the orientation lug and gyro survey tool and tag the packer. Strap the pipe going in the hole. This measurement will be used when setting the whipstock. Accuracy is very important. Check the strap with the wireline measurement. Seat into the riser slot for orientation. Re-set the gyro several times until a consistent azimuth is reached. TOOH.

3. Pick up the latch, debris sub and retrievable whipstock. Tighten to the required torque. Make up the whipstock assembly over the hole and back off the spline sleeve (this tool has 72 splines with increments of 5 degrees) on the latch assembly. Stretch a string from the whipstock lug to the compass card at the latch. Orient the azimuth of the packer slot to the key on the latch assembly. Once the latch assembly has been aligned, orient the whipstock face to the desired (90 degrees) azimuth. Set the shear pins (5000 #'s per pin) for the required release on the latch.

4. Pick up the whipstock assembly using the lifting clevis. Snub into the rotary. Install the starting mill assembly on the whipstock. TIH slowly (no speed records). Record the weight of the assembly prior to stacking out on the packer. Lower the assembly until weight loss is observed. Do not exceed the shear pin requirements! Pick up and pull 5-8000 pounds to verify the latch is set (do not exceed the shear pin requirements). Shear off the starting mill.

5. Pick up the power swivel and begin circulating. Pick up the drill pipe until the starting mill has cleared the whipstock and start rotation. Lower the drill pipe slowly until the torque gauge suggest the starting mill is contacting the casing. Adjust weight and speed until satisfied with the penetration rate. Mill to a predetermined depth that will assure the setting lug is completely removed and a cut out in the casing has been initiated. TOOH.

6. TIH with the metal muncher window mill, string mill and the watermellon mill. Resume milling operations and mill until the complete assembly has cleared the casing. Pick up and lower the string several times without rotation to assure a good clean window has been obtained. Circulate the hole clean. TOOH.

7. Inspect the mill on the surface. If extreme wear is evident, consideration should be given to repeating the above step.

HORIZONTAL PRODUCTION HOLE:

1. Rig up Scientific Drilling Company. Adjust plan to target as necessary. Trip in the hole with Scientific Drilling's curve building assembly. This will be a 4-3/4" insert bit, 3-3/4" PDM, float sub/orienter combo, 2-flexible monel collars and 2-7/8" AOH drill pipe.

2. Build curve to estimated target depths and angles as follows:

True Vertical Depth	5930'
Measured Depth	6019'
Final Angle	91.35 degrees
Target Azimuth	90 degrees
Build Rate	38.19 degrees/100'

Drill the curve sliding as necessary to stay on target. It is recommended that after each slide, the bit be pulled back and washed through the slide. Once the curve is built, rotate through the curve section noting tight spots and fill. Make at least one short trip prior to tripping out of the hole.

3. Trip in the hole with Scientific Drilling's lateral assembly. This will be a 4-3/4" PDC bit, 3-3/4" articulated motor, float sub/orienter combo, 2 - flexible monel collars and 2-7/8" AOH drill pipe.

4. Drill +/-846' of horizontal hole per the attached Scientific well plan.

5. Continue drilling the horizontal section per the Texaco Engineer (Kevin Hickey 915-688-2950, home 915-684-8136) recommendations.

6. Trip out of the hole with the drilling assembly.

7. TIH and retrieve the whipstock. TOOH. TIH with the latch, +/-35' space out assembly (drill collars and stabilizer), debris sub and another retrievable 3 degree whipstock (top of window at +/-5705', bottom of window at +/-5711'). Repeat steps 2-7 (production hole) and steps 1-5 (horizontal hole). Build, the curve to estimated target depths and angles as follows:

True Vertical Depth	5930'
Measured Depth	6022'
Final Angle	87.94 degrees
Target Azimuth	258.5 degrees
Build Rate	33.68 degrees/100'

8. Trip in the hole with the lateral drilling assembly. Drill the lateral per Scientific Drilling's well plan. TOOH with the drilling assembly. Set a wireline set, tubing retrievable bridge plug for 5-1/2", 17.0#/ft casing at +/- 5600'. Test plug to 1000 psi.

9. Lay down the drill pipe.

10. Nipple down the BOP stack. Install a manual 3000 psig BOP equipped with blind rams and 2-7/8" pipe rams. Release the rig. Rig down and move out rotary tools.

COMPLETION PROCEDURE:

1. Back drag the location and set pulling unit anchors.

2. Move in and rig up a pulling unit.

3. Trip in the hole with a retrieving head on 2-7/8" tubing. Retrieve the plug. Trip out of the hole and lay down the plug. Acidize each lateral. The acid jobs will be done down 2-7/8" tubing in the vertical portion with a treating packer set 100' above the top window. Below the packer, the string will consist of 2-7/8" PH-6 tubing and ported subs. The whipstock will be retrieved after acidizing the first lateral. Use a bent joint to orient into the lower lateral.

4. Flow back immediately. Flow/swab test for 12 hours. TOOH with the string.

5. TIH with packer and tubing and place on injection as per OU recommendation.

POTENTIAL PROBLEMS

Horizontal Production hole:

a) Loss circulation material and/or other plugging agents are not to be used in this portion of the hole.

b) The horizontal lateral will be drilled with fresh water from the Vacuum fresh water supply well.

c) No hydrogen sulfide is expected, but H2S detection equipment is to be installed.

MUD PROGRAM:

Interval	Type	Weight	Viscosity	Remarks
Curve	Fresh Water	8.4 ppg	35	Raise visc. with starch and gel
Horizontal	Fresh Water	8.4-9.0 ppg	28-29	Circulate reserve

EVALUATION PROGRAM

Coring:

No cores are anticipated.

Mud Loggers:

A mud logger will be rigged from the start of the curve to total depth. Contact Kevin Hickey at (915) 688-2950 for the name of the mud logger.

Open Hole Logs:

The following open hole logs will be run in the vertical section of the well:

Run 1: Gyro from 5770'- surface for determination of bottom hole location (Scientific Drilling responsibility).

The guidance system in the curve and horizontal sections of the hole will consist of a MWD system.

Horizontal Hole Logs:

No logs are anticipated.

CASING PROPERTIES

KB – 4019', GL 4005', PBTD – 6000', TD – 6250'

	DEPTH	BURST Rated	BURST (75%)	COLLAPSE Rated	COLLAPSE (75%)	TEST PRESSURE
8-5/8",24#,WC50	0'-1535'	2950	2212	1370	1027	1000
*5-1/2",15.5#, K55	0'-5420'	4810	3600	4040	3030	1000
*5-1/2", 17.0#, WC50	5420-6250'	5320	3990	4910	3680	1000

*Based casing setting depths on 43.7 ft./joint average.

DV Tool @ 5021'

1st stage – cemented w/ 375 sx Class H, circulated 100 sx.
2nd stage – cemented w/ 1900 sx 35/65 Poz H w/ adds. F/b 100 sx Class H.
TOC @ 1600' by temperature survey

(11/92) Glorieta Perforations:
5922-5949
5958-5991
6088-6118

(9/99) Glorieta Perforations squeezed with 100 sacks Class C with 0.4% D156, 0.2% D46, 0.3% D65. Reverse out 35 sacks cement.

(9/99) Glorieta Perforations:
5796-5810
5816-5826
5922-5949
5988-5991

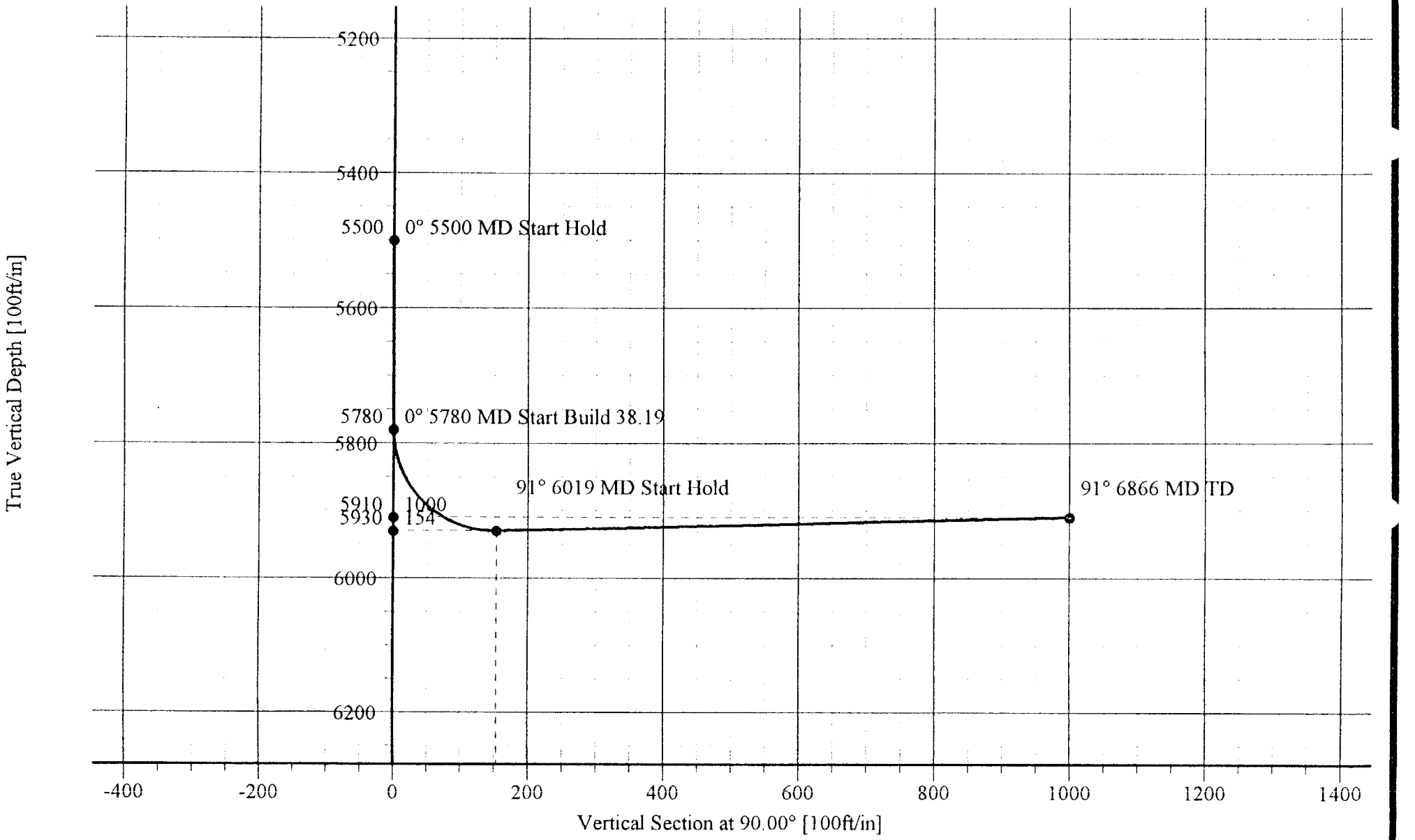
Casing collars:
5468, 5509, 5550, 5596, 5638, 5678, 5722, 5766, 5808, 5850 (short joint), 5871, 5912'

CJA 6/6/00

Scientific Drilling

Texaco E & P, Inc.

Field: Vacuum Glorieta West Unit
Site: Lea County, New Mexico
Well: VGWU #78
Wellpath: lower Lateral East VS
Plan: Plan #1



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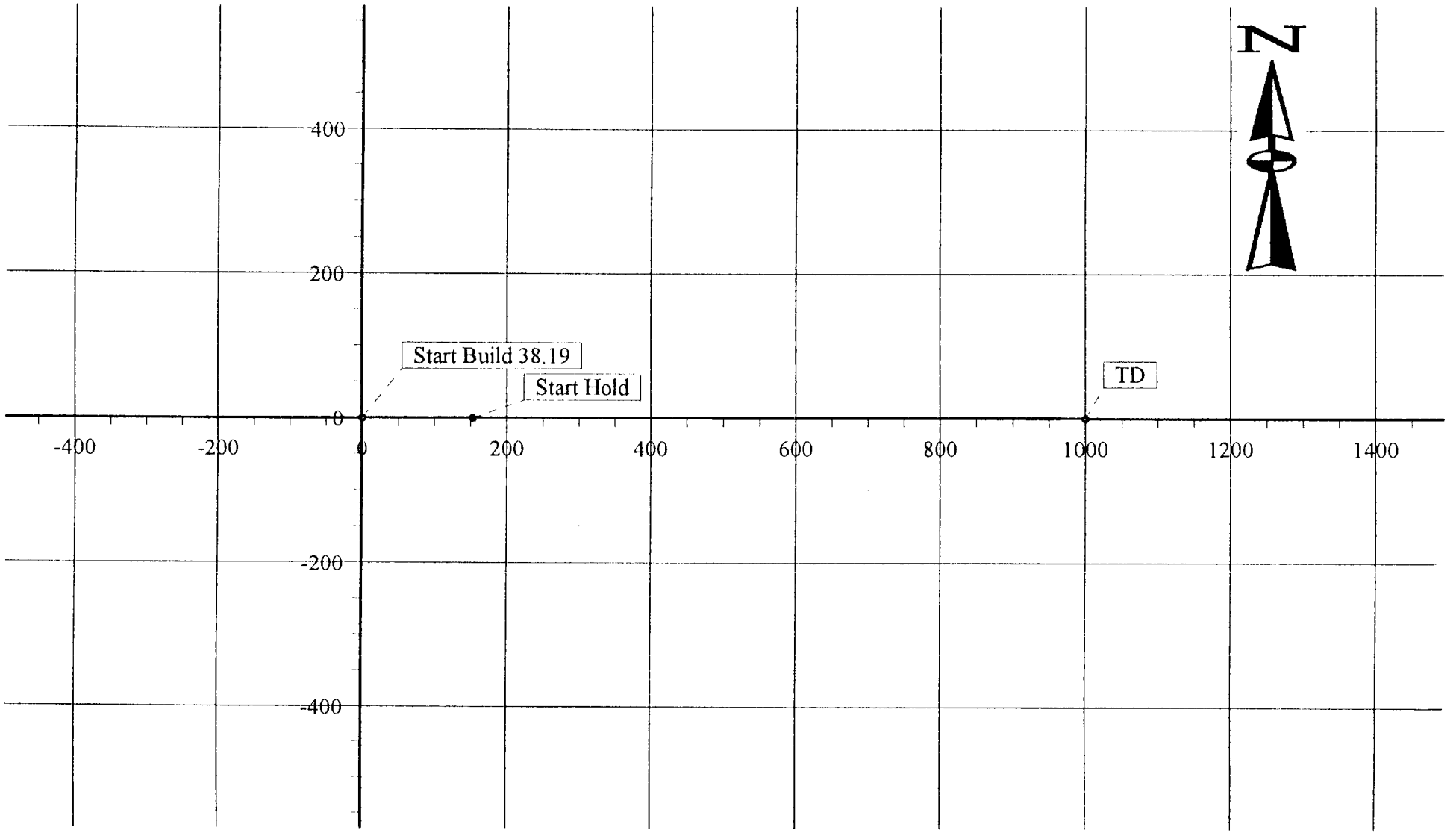

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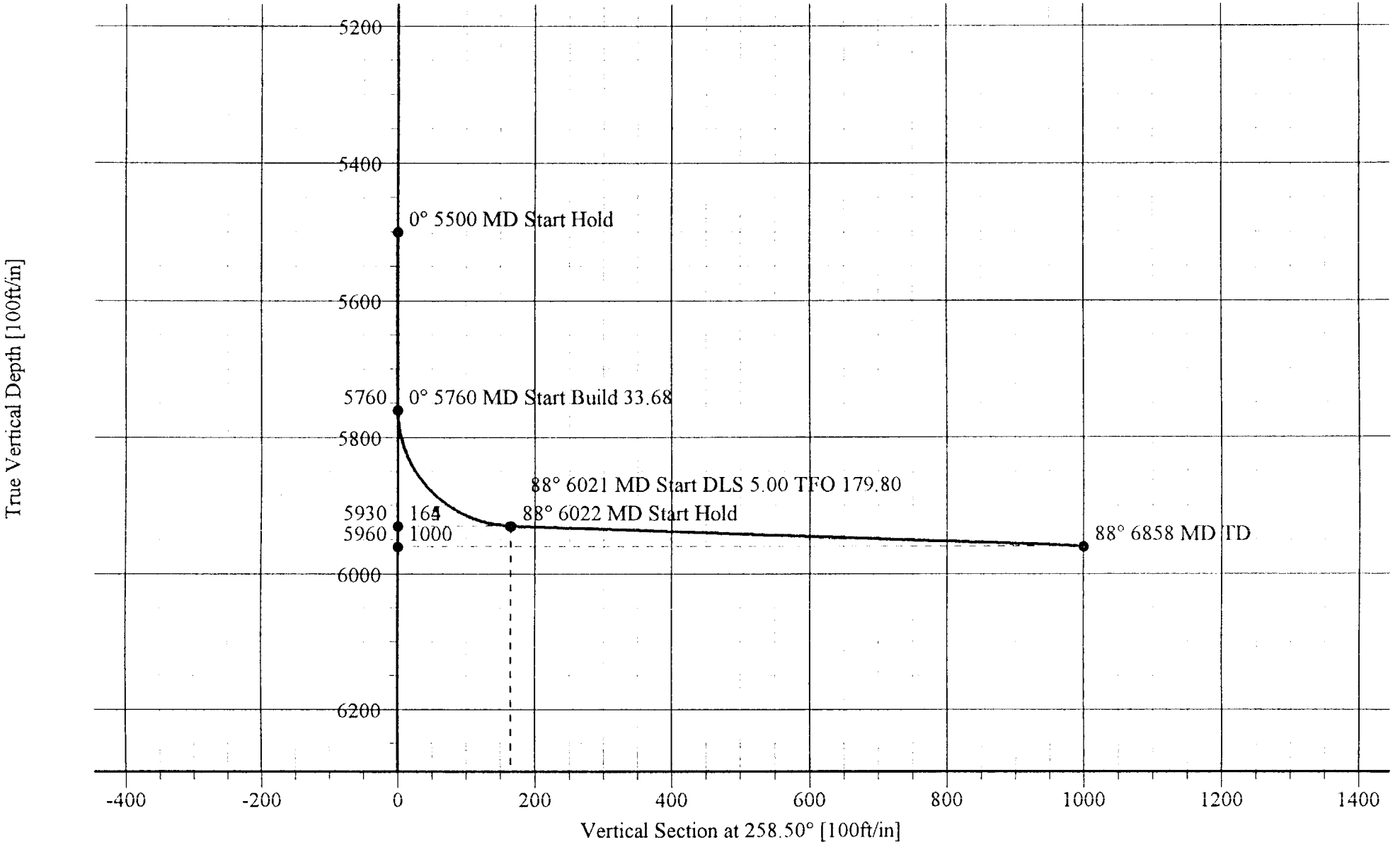

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Well: VGWU #78
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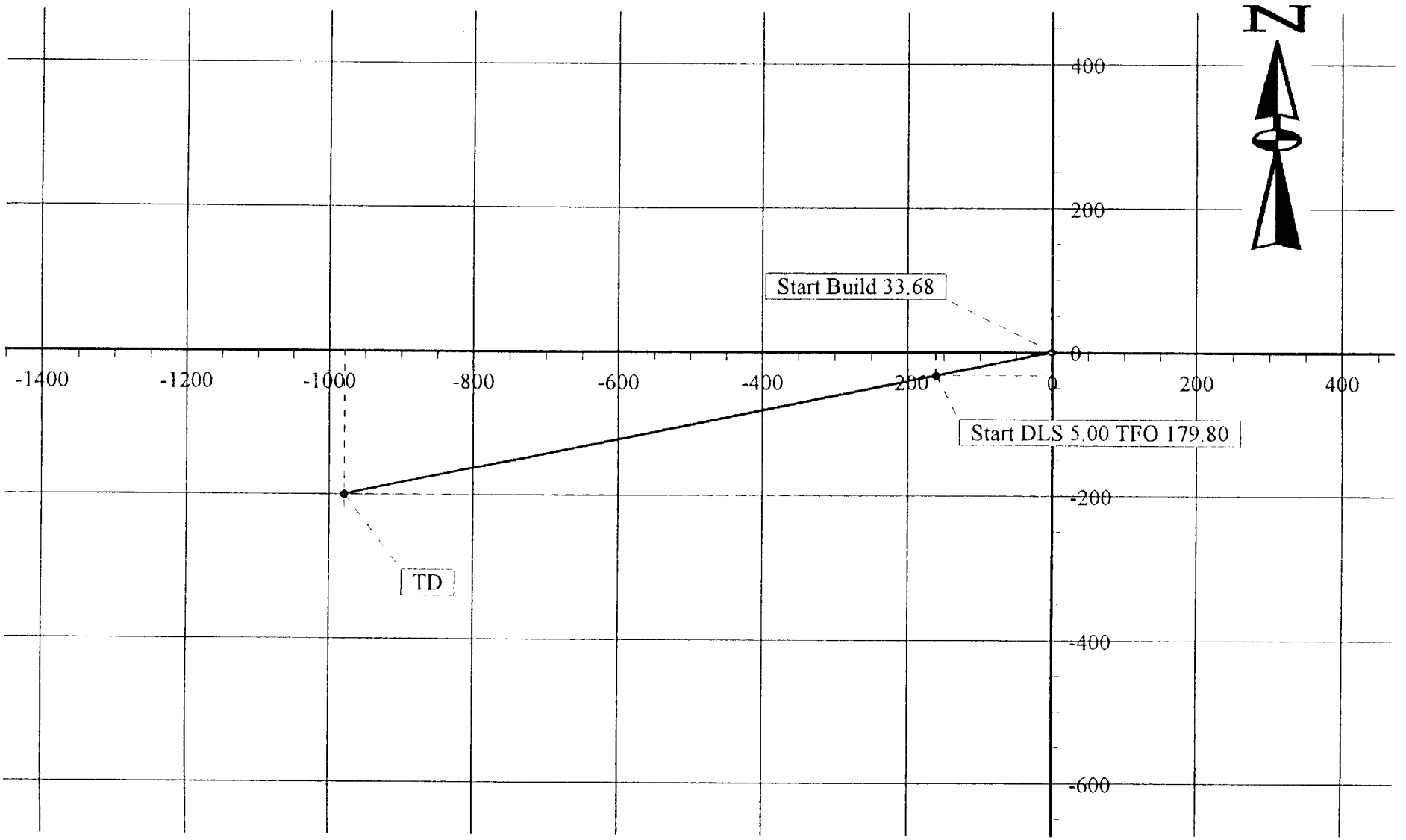

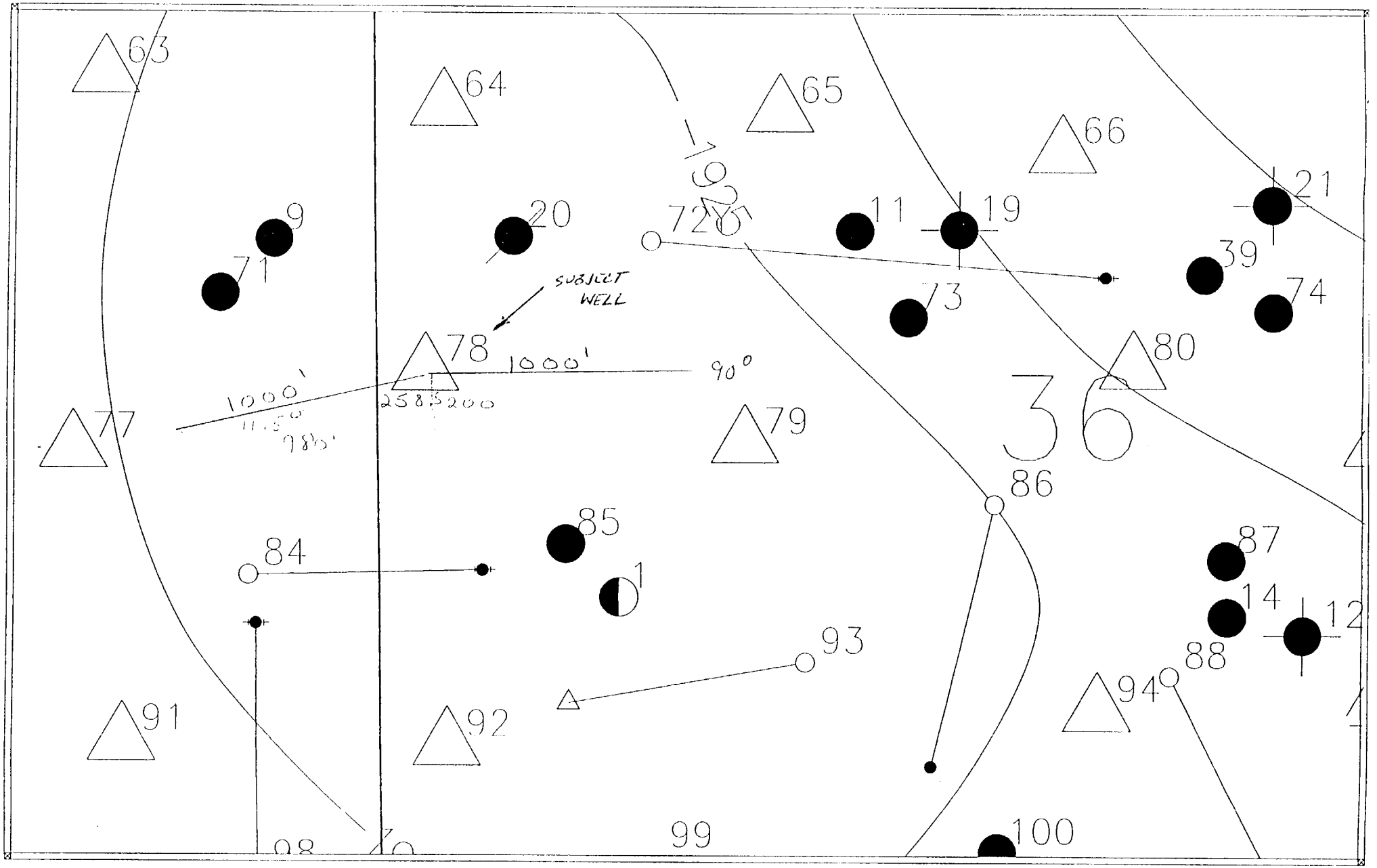

Scale 1:6000.

200. 0. 200. 400. 600. 800. 1000. feet

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AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-025-31707	62160	VACUUM GLORIETA

4 Property Code	5 Property Name	6 Well No.
11125	VACUUM GLORIETA WEST UNIT	78

7 OGRID Number	8 Operator Name	9 Elevation
022351	TEXACO EXPLORATION & PRODUCTION INC.	4005'

10 Surface Location

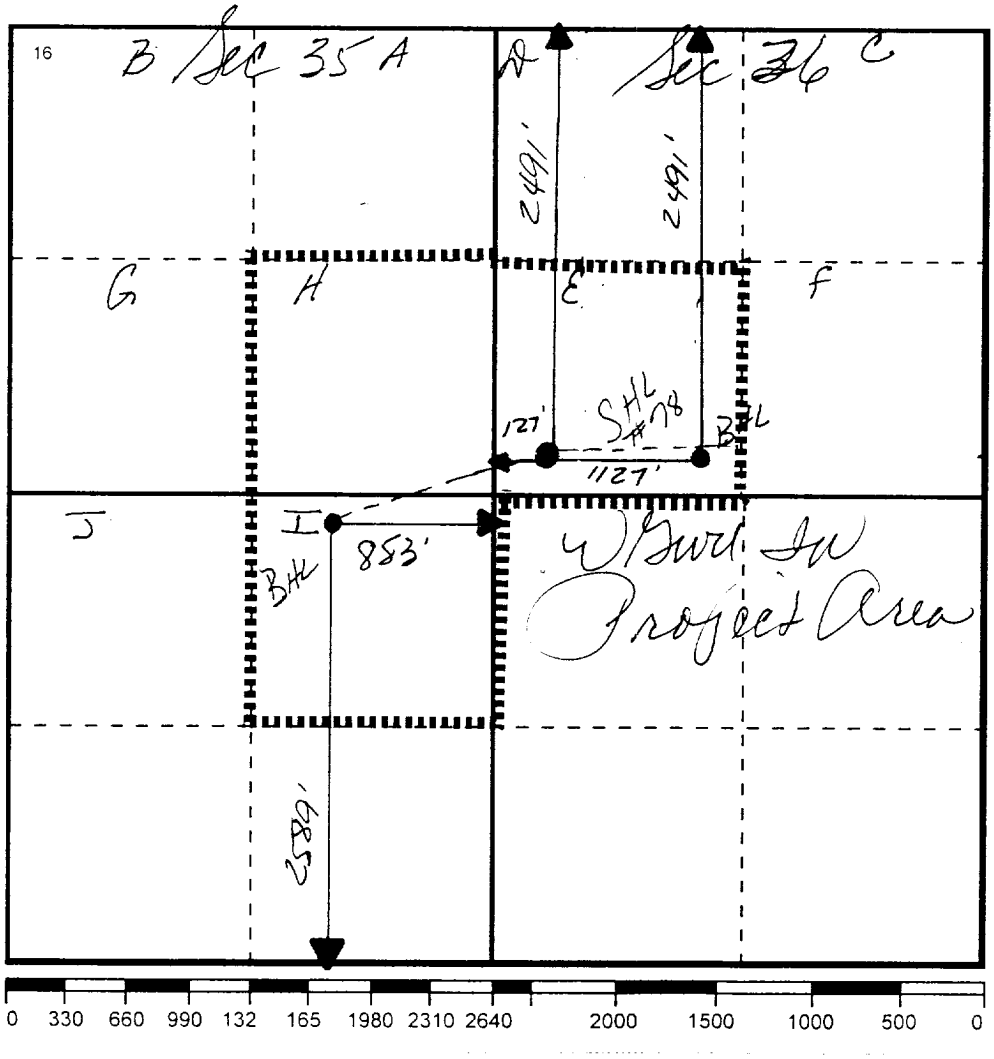
Ul or lot no	Section	Township	Range	Lot.Idn	Feet From The	North/South Line	Feet From The	East/West Line	County
E	36	17S	34E		2491	North	127	West	Lea

11 Bottom Hole Location If Different From Surface

Ul or lot no	Section	Township	Range	Lot.Idn	Feet From The	North/South Line	Feet From The	East/West Line	County
E/I	36/35	17S	34E		2491/2589'	NORTH/~~South~~	1127'/853'	West/EAST	LEA

12 Dedicated Acre	13 Joint or Infill	14 Consolidation Code	15 Order No.
120	No		

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



17 OPERATOR CERTIFICATION

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

Signature
J. Denise Leake

Printed Name
J. Denise Leake

Positio
Engineering Assistant

Date
7/25/00

18 SURVEYOR CERTIFICATION

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

Signature & Seal of Professional Surveyor

Certificate No.

DeSoto/Nichols 3/94 ver 1.10