Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.
30-043-20323

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. TYPE OF WELL
OIL WELL [X] GAS WELL [ ] OTHER SINGLE ZONE [ ] MULTIPLE ZONE [ ]

2. NAME OF OPERATOR
Worldwide Exploration Consultants Inc.

3. ADDRESS OF OPERATOR
501 Airport Drive,
% K & A Minerals Management Inc. Farmington, New Mexico

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface
660' FSL, 1650' FEL Sec 33, T20N, R4W
At proposed prod. zone

5. LEASE DESIGNATION AND SERIAL NO.
N M 7998

6. IF INDIAN, ALLOTTEE OR TRIBE NAME

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
Federal 33

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
Wildcat Entrada

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 33, T20N, R4W, N M P M

12. COUNTY OR PARISH
Sandoval

13. STATE
N M

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
19 miles north of Torreon Trading Post.

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)
660'

16. NO. OF ACRES IN LEASE
280

17. NO. OF ACRES ASSIGNED TO THIS WELL
40

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.
None

19. PROPOSED DEPTH
5900

20. ROTARY OR CABLE TOOLS
Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.)
6770' GR

22. APPROX. DATE WORK WILL START*
May 1, 1978

23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12¼	9 5/8 (new)	36	200	To surface
8 3/4	7 (new)	20 & 23	5900	To surface by Caliber Log

Operator proposes to drill a Jurrasic test to 5900'. Completion will be determined from logs. A series 900 (3000 psi W.P.) blowout preventer will be installed on the surface pipe and will be tested to 500 psi before drilling the surface plug. The geologic name of the surface formation is the Lewis shale. Pertinent formation tops are estimated as Point Lookout 2400, Mancos 2500, Gallup 3300, Dakota 4550 and Entrada 5580. No abnormal formation pressures or temperatures are anticipated. Drilling should require approximately 15 days. Drilling mud will be approximately 9 lb., 36 vis.

RECEIVED
APR 10 1978
OIL CON. COM.
DIST. 3

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal is to deepen or plug back, give data on present productive zone and proposed new productive zone. If proposal is to drill or deepen directionally, give pertinent data on subsurface locations and measured and true vertical depths. Give blowout preventer program, if any.

24.
SIGNED [signature] TITLE Area Manager K&A Minerals Management DATE April 4, 1978

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

RECEIVED
APR 5 1978
U. S. GEOLOGICAL SURVEY
DURANGO, COLO.

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	Lease	Well No.
World Wide Exploration Consultants Inc.	Federal 33	1

Unit Letter	Section	Township	Range	County
C	33	20N	4W	Sandoval

Actual Footage Location of Well:
660 feet from the South line and 1650 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6770	Entrada	Wildcat	40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

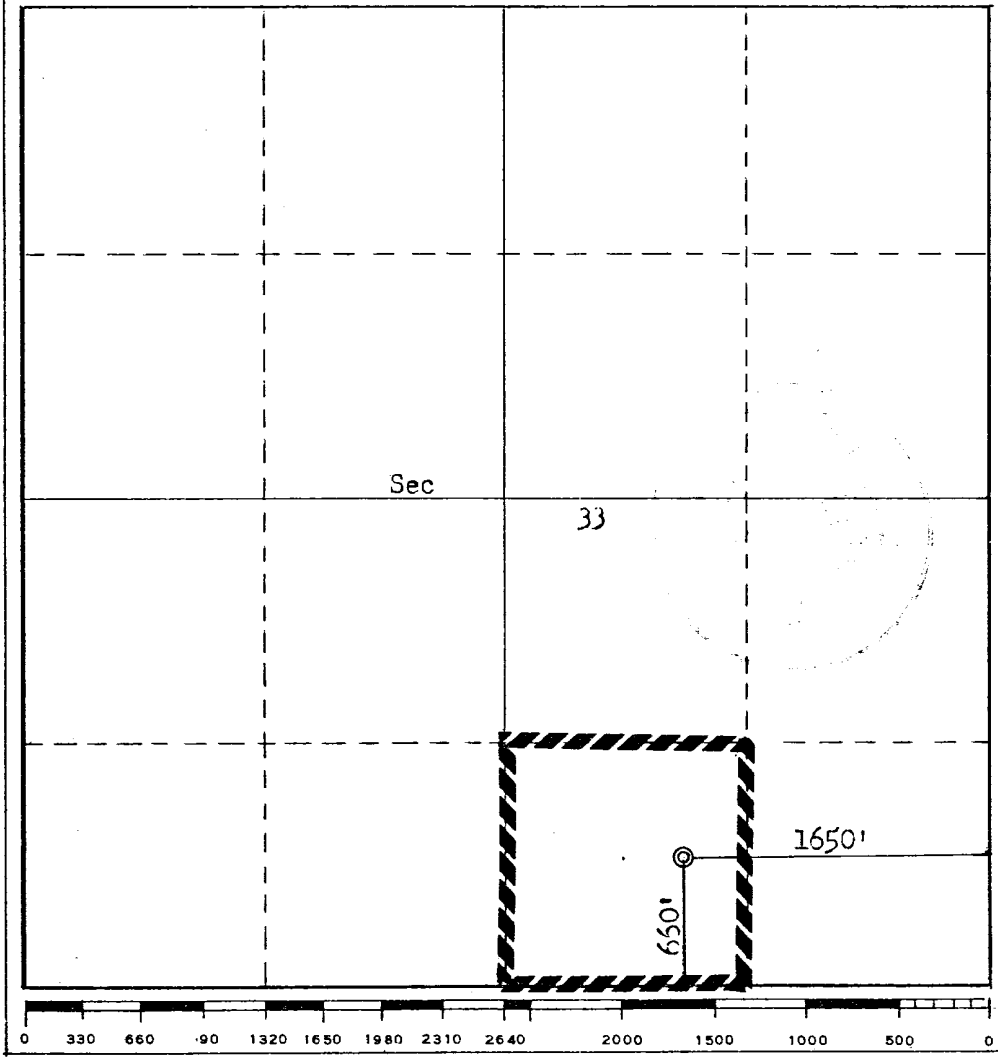
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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.

W E Landry
Name W. E. Landry
Position Area Manager Minerals Management
Company K&A, Inc. Minerals Mgmt.
Date April 4, 1978

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 April 1978

Registered Professional Engineer and/or Land Surveyor.

Fred B. Kerr, Jr.

Certificate No. 3950

REGISTERED LAND SURVEYOR
STATE OF NEW MEXICO
3950
FRED B. KERR, JR.

DEVELOPMENT PLAN FOR SURFACE USE

WORLDWIDE EXPLORATION CONSULTANTS INC.

FEDERAL 33-20-4 WELL NO. 1

SANDOVAL COUNTY, NEW MEXICO

1. Existing Roads

Roads to the location consist of state highway 197 southwest 15 miles from Cuba and county roads, 6 miles toward the Ojo Encino school, then one mile west and one mile north to the access road.

2. Planned Access Road

The access road will be 1000 feet long, 16' wide with negligible grade and adequately ditched for drainage.

3. Location of Existing Wells

Abandoned wells in the area are shown on the area map.

4. Location of Proposed Facilities

Flow lines and tank battery will be on the location pad. Equipment and pits will be fenced as required for protection of livestock and wildlife.

5. Location and Type of Water Supply

Water will be hauled by truck from the Media Dome Field water well.

6. Source of Construction Materials

Not applicable.

7. Methods of Handling Waste Disposal

Cuttings, drilling fluids and produced fluids will be retained in the reserve pit which will be fenced until sufficiantly dry to permit closure with 4 ft. of cover. There will be no sewage. Garbage and other waste material will be placed in the burn pit for disposal and the non burnable portion will be covered with 4 ft. of cover at the termination of drilling operations. A portable toilet will be used. Wellsite cleanup will commence immediately upon completion of drilling operations and following the rig move.

8. Ancillary Facilities

No camps or airstrips are proposed for this location.

9. Well Site Layout

The well site is relatively flat with a maximum 3 ft. cut which will have a 3 : 1 slope to the pad. The rig orientation is conventional with steel mud pits and unlined reserve pit to the left, facing the pipe racks from the drawworks, exact placement is dependent upon the contractor available at the time of approval. Mud pumps and mud storage are to be located to the rear of the drawworks. Parking is to be on the side opposite the reserve pit.

10. Plans for Restoration of Surface

Upon completion of drilling operations, the location will be cleaned and pits fenced for the protection of livestock and wild life. When the pits are sufficiently dry, the spoil will be adequately covered and the area not required for operation will be restored and reseeded in accordance with B. L. M. stipulations.

11. Other Information

This well is to be located in an area of gently rolling sandy shale terrain with sagebrush and blue grama vegitation, generally over grazed by livestock. Inhabited dwellings and stock enclosures are shown on the vicinity map. An archeological study will be conducted and copy of the report will be furnished, as required.

12. Lessee's or Operator's Representative

K & A Minerals Management Inc.
501 Airport Drive
Farmington, New Mexico 87401
Telephone 505-327-4441

13. Certification

I hearby certify that I, or persons under my direct supervision, have inspected the proposed drillsite and access route; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed by Worldwide Exploration Consultants Inc. and its contractors and sub-contractors in conformity with this plan and the terms and conditions under which it is approved.

April 4, 1978
Date

Area Manager
Name and Title

K & A Minerals Management, Inc.

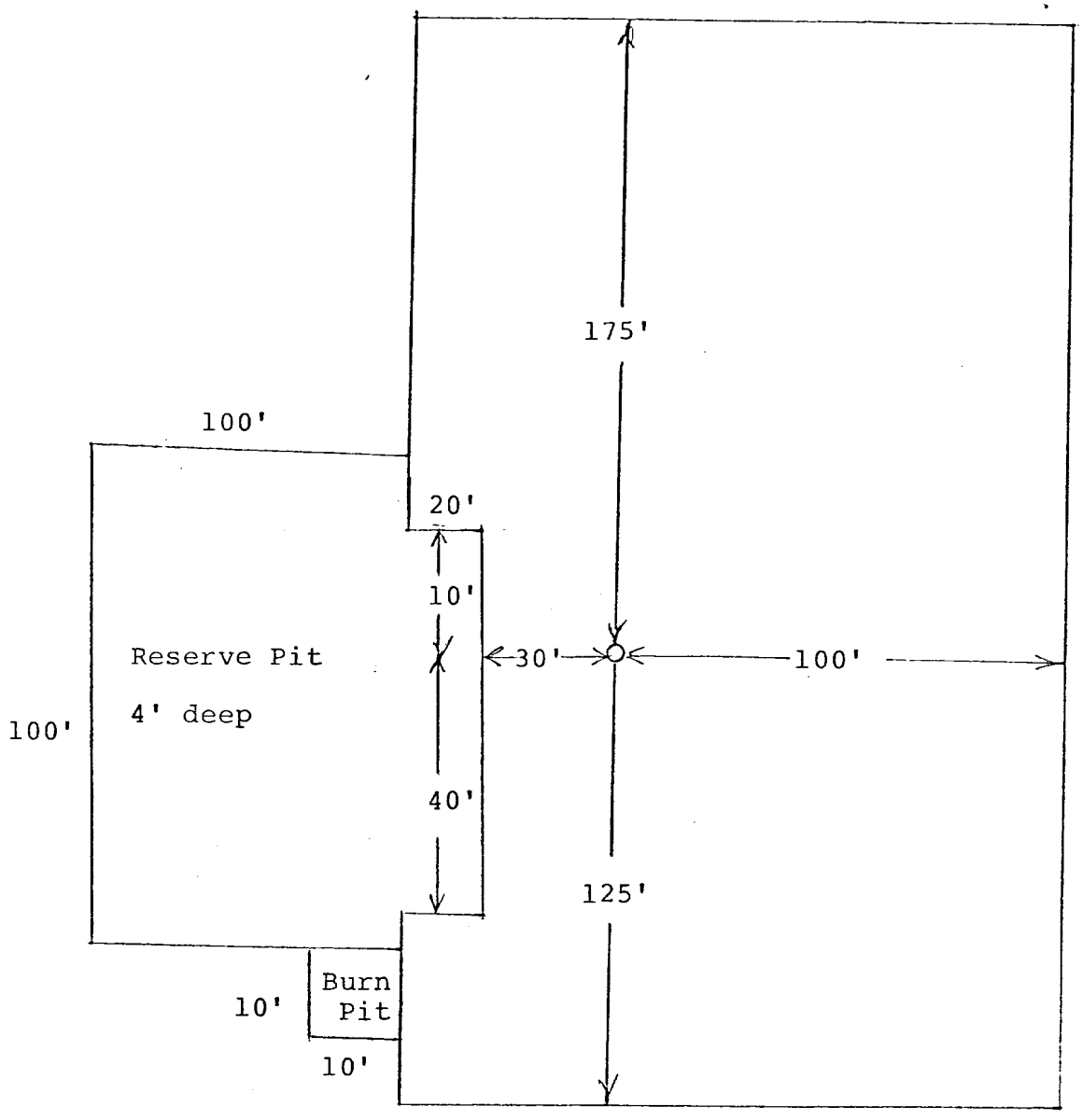
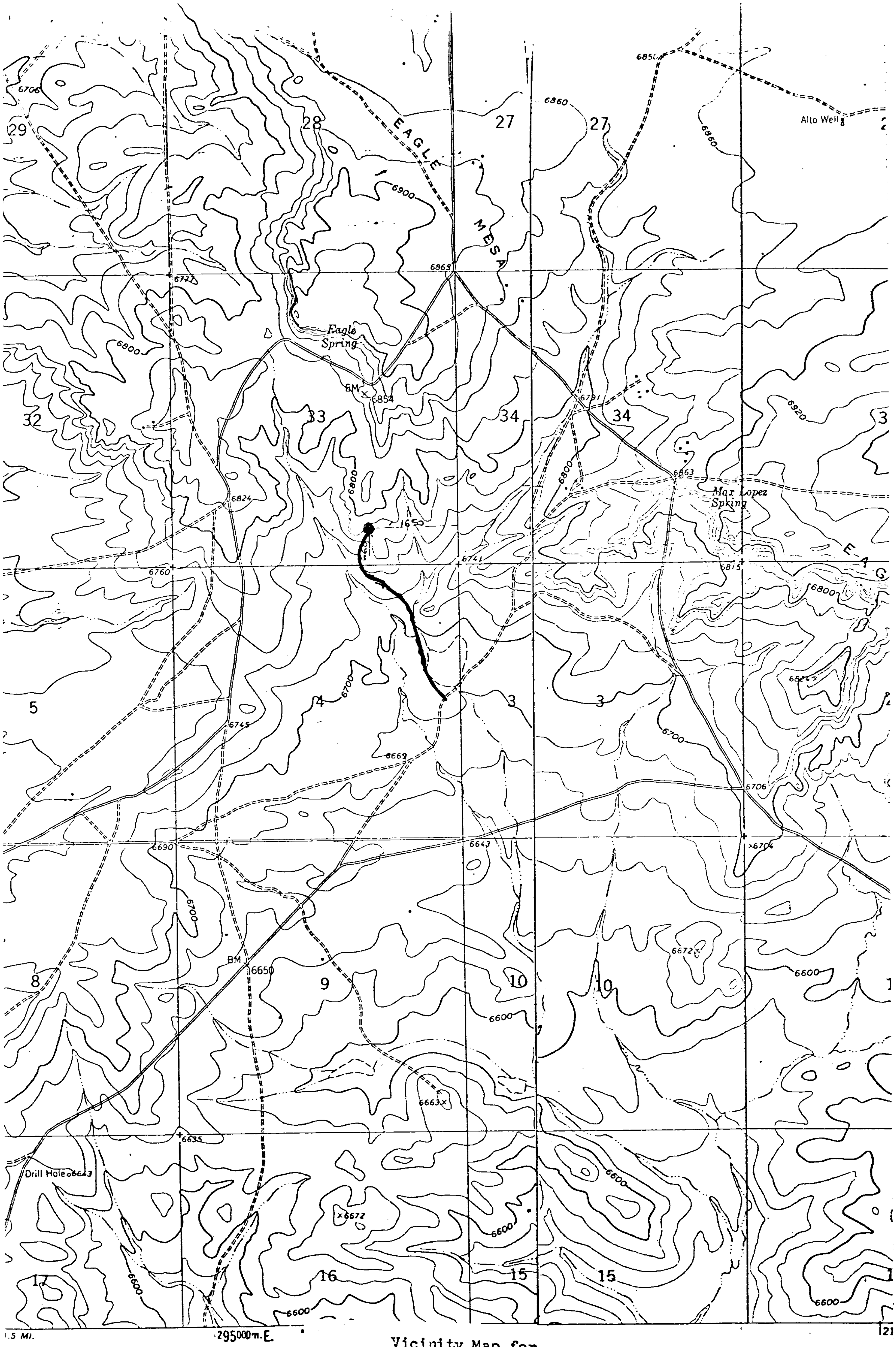


DIAGRAM OF WELL LOCATION

N



Vicinity Map for
WORLD WIDE EXPL. CONSULTANTS INC. #1 Federal 33
660'FSL 1650'FEL Sec 33-T20N-R4W
Sandoval County, New Mexico

the Geological Sur

m aerial

Light-duty

Unimproved dirt

Polyconic projection 1927 North American datum
10,000 foot grid based on New Mexico coordinate system.

WORLDWIDE EXPLORATION CONSULTANTS INC.

DRILLING PROGRAM

FEDERAL 33 WELL NO. 1

660'FSL, 1650' FEL, SECTION 33, T20N, R4W

SANDOVAL COUNTY, NEW MEXICO

I. Estimated Formation Tops — 6760' (Est.) 6772' KB

Formation	Depth
Cliffhouse	650'
Point Lookout	2430'
Mancos	2550'
Gallup	3365'
Greenhorn	4355'
Dakota	4595'
Morrison	4750'
Entrada	5630'
Carmel	5880'
Total Depth	5900'

II. Potential Problems

1. Lost circulation in Gallup.
2. Bad roads in inclement weather.
3. Long water haul.

III. Drilling Procedure

1. Move in and rig up rotary tools.
2. Drill 13¾" hole to ± 200'.
3. Run 9 5/8", 36# surface casing.
4. Cement with 200 sacks class "B", 2% CaCl.
5. Wait on cement minimum of 12 hours. Nipple up while waiting on cement. Test BOP to 500 psi for 30 minutes.
6. Drill cement and float with water. Displace water from hole with mud. Drill 8 3/4" hole to 8' below the top of the Entrada.

III. Drilling Program (continued from page 1)

7. Test the Entrada interval.
8. Drill to total depth. Penetrate 20' of Carmel.
9. Run open hole logs as specified.
10. a. If productive, run 7" casing and cement as specified. Amounts to be determined from caliper log.
    b. If non-productive, P & A after obtaining approvals.
11. Move out rotary rig, clean location and move in completion unit.

IV. Casing and Float Equipment

String	Depth	Amount	Size	Weight/Ft.	Grade	Joint
Surface	0- 200	200'	9 5/8"	36#	K-55	ST&C
Production	0- 40	40'	7"	23#	K-55	ST&C
Production	40-3500	3460'	7"	20#	K-55	ST&C
Production	3500-5900	2400'	7"	23#	K-55	ST&C

1. Surface-----To be equipped with guide shoe, float collar and two centralizers.
2. Production--To be equipped with guide shoe, differential fill-up collar and cement stage tool above the Gallup. Centralizers to be installed and alternate collars from the shoe to 150 feet above the pay zone and above and below the stage tool. Cement baskets are to be installed below the stage tool. (If lost circulation is experienced an external casing packer is to be considered).

V. Cementing Program

1. Surface-----200 sacks Class "B" cement, 2% CaCl (100% excess).
2. Production--Two-stage using 65-35 Pozmix, 6% gel, with 10# Gilsonite per sack. Tailed in with 100 sacks Class "B" cement with 10% salt for first stage and 50 sacks Class "B", 10% salt for the second stage. Volume of cement to be based upon the claiper log.

VI. Deviation

1^{o} per 100', maximum of 5^{o}. Maximum 500' interval.

VII. Mud Program

1. Surface 0'-200' - Drill this portion with lime treated slurry with sufficient viscosity to clean hole and run casing.
2. Production 200'-6682'- Drill with low solids non-dispersed mud: Wt. 8.5-9.2, Vis. 38-42, Fl 8-10, pH 9^{+}.

VIII. Logging Program

1. Dual Induction Laterolog: Surface casing to Total Depth. 2" scale correlation and 5" logrithmic scale.
2. Compensated Neutron - Formation Density: Surface casing to Total Depth (GR to Surface).

IX. Samples

1. 30' from surface to 4300'.
2. 10' from 4300' to Total Depth or as specified by well site geologist.

NOTE: Label each sack with well name and depth taken. Store in a cool dry place (Geologist may instruct crew to log samples).

X. Drill Stem Test

Test all significant shows (as specified by wellsite Geologist). Test Entrada interval Preflow 15 min., Initial Shut In 30 min., Flow Period 60 min., Final Shut In 120 min.

XI. Coring

None anticipated.

XII. Blowout Preventer

1. 10" 900 lb. Series (3000 psi working pressure) double, hydraulically operated, with pipe and blind rams.
2. Choke manifold with pressure rating equal to blowout preventer.

XIII. Special Notes

1. Keep accurate measurement of drill pipe. Strap pipe prior to coring, logging or drill stem testing.
2. Have full opening floor valve with drill pipe thread always available.

BIT PROGRAM

NO.	SIZE	MAKE	TYPE	DEPTH IN	DEPTH OUT	FOOTAGE	WEIGHT	RPM
1.	13 1/4"	HTC	OSC-3	0'	200'	200'	All	120
2.	8 3/4"	HTC	OSC-3	200'	1500'	1300'	45	80
3.	8 3/4"	SEC	S-3	1500'	2500'	1000'	35/45	80
4.	8 3/4"	STC	DGT	2500'	3350'	850'	35/45	80
5.	8 3/4"	HTC	J-22	3350'	4500'	1150'	40	40/45
6.	8 3/4"	STC	F-3	4500'	5638'	1138'	40	40
7.	8 3/4"	STC	H7TG	5638'	5900'	262'	45	60