

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. TYPE OF WORK
DRILL ☒ DEEPEN ☐ PLUG BACK ☐

b. TYPE OF WELL
OIL WELL ☒ or GAS WELL ☒ OTHER ☐ SINGLE ZONE ☐ MULTIPLE ZONE ☐

2. NAME OF OPERATOR
W. M. GALLAWAY

3. ADDRESS OF OPERATOR
101-2 Petroleum Plaza Bldg., Farmington, N.M. 87401

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.)
At surface 2222' FSL and 1562' FWL
At proposed prod. zone Same

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*
Approximately 10 miles West of Huerfano

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any) 1850'

16. NO. OF ACRES IN LEASE

17. NO. OF ACRES ASSIGNED TO THIS WELL 320

18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. 2220'

19. PROPOSED DEPTH 5150'

20. ROTARY OR CABLE TOOLS Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.) 6720' GR

22. APPROX. DATE WORK WILL START* As soon as possible.

12. COUNTY OR PARISH San Juan

13. STATE N.M.

5. LEASE DESIGNATION AND SERIAL NO. NM-036252

6. IF INDIAN, ALLOTTEE OR TRIBE NAME U. S.

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME Delo

9. WELL NO. 12

10. FIELD AND POOL, OR WILDCAT Bisti Gallup

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA Sec. 26, T25N, R11W

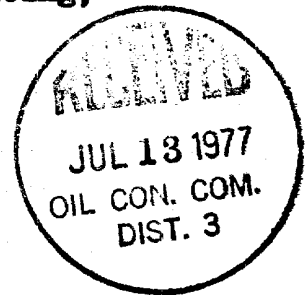
23. PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
12 1/4"	8 5/8"	28 #	200'	100 Sacks
7 7/8"	4 1/2"	10.5#	5150'	300 Sacks

Plan to mud drill through Gallup Formation and production casing through zone, perforate casing, stimulate well by fracing, run tubing and test well.

Blowout preventer diagram attached.

Gas is dedicated.



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 W. M. Gallaway TITLE Operator DATE 7-1-77
(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____
CONDITIONS OF APPROVAL, IF ANY:

OKaf

*See Instructions On Reverse Side

RECEIVED
JUL 11 1977
U. S. GEOLOGICAL SURVEY

Instructions

General: This form is designed for submitting proposals to perform certain well operations, as indicated, on all types of lands and leases for appropriate action by either a Federal or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office.

Item 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable State or Federal regulations concerning subsequent work proposals or reports on the well.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on this reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal or State agency offices.

Items 15 and 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective production zone.

Item 22: Consult applicable Federal or State regulations, or appropriate officials, concerning approval of the proposal before operations are started.

**NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACERAGE DEDICATION PLAT**

All distances must be from the outer boundaries of the Section

Operator W. M. GALLAWAY			Lease DELO		Well No. 12
Unit Letter K	Section 26	Township 25 NORTH	Range 11 WEST	County SAN JUAN	
Actual Footage Location of Well: 2222 feet from the SOUTH line and 1562 feet from the WEST line					
Ground Level Elev. 6760	Producing Formation GALLUP	Pool BISTI		Dedicated Acreage: 320 ✓	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 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. M. Gallaway
Name

W. M. Gallaway
Position

Operator
Company

W. M. Gallaway
Date

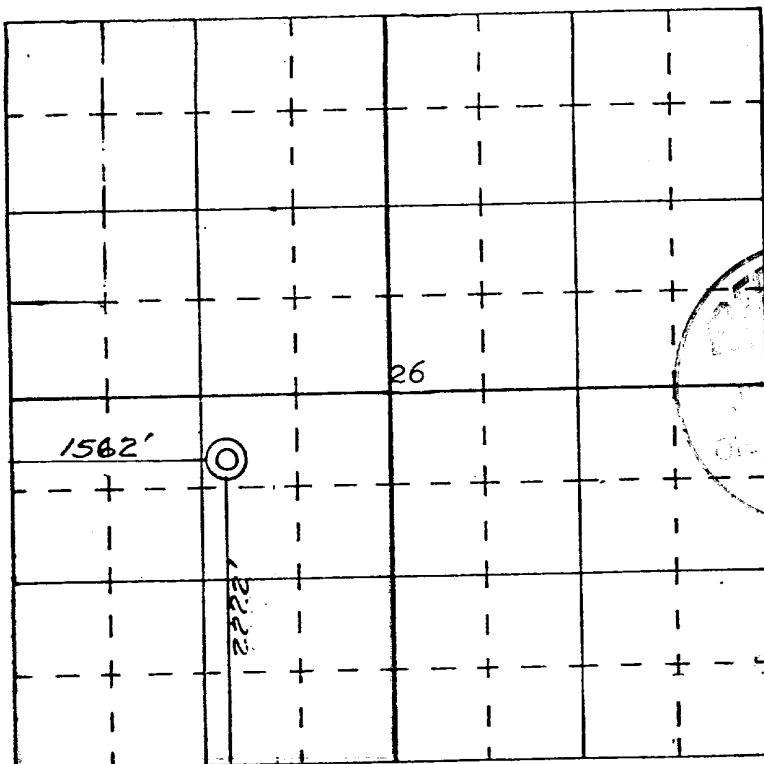
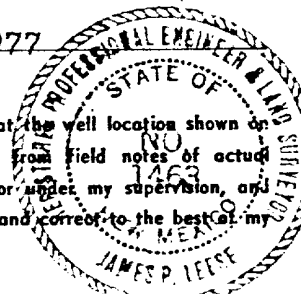
July 1, 1977

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.

21 June 1977

Date Surveyed

James P. Leese
Registered Professional Engineer
and/or Land Surveyor **James P. Leese**



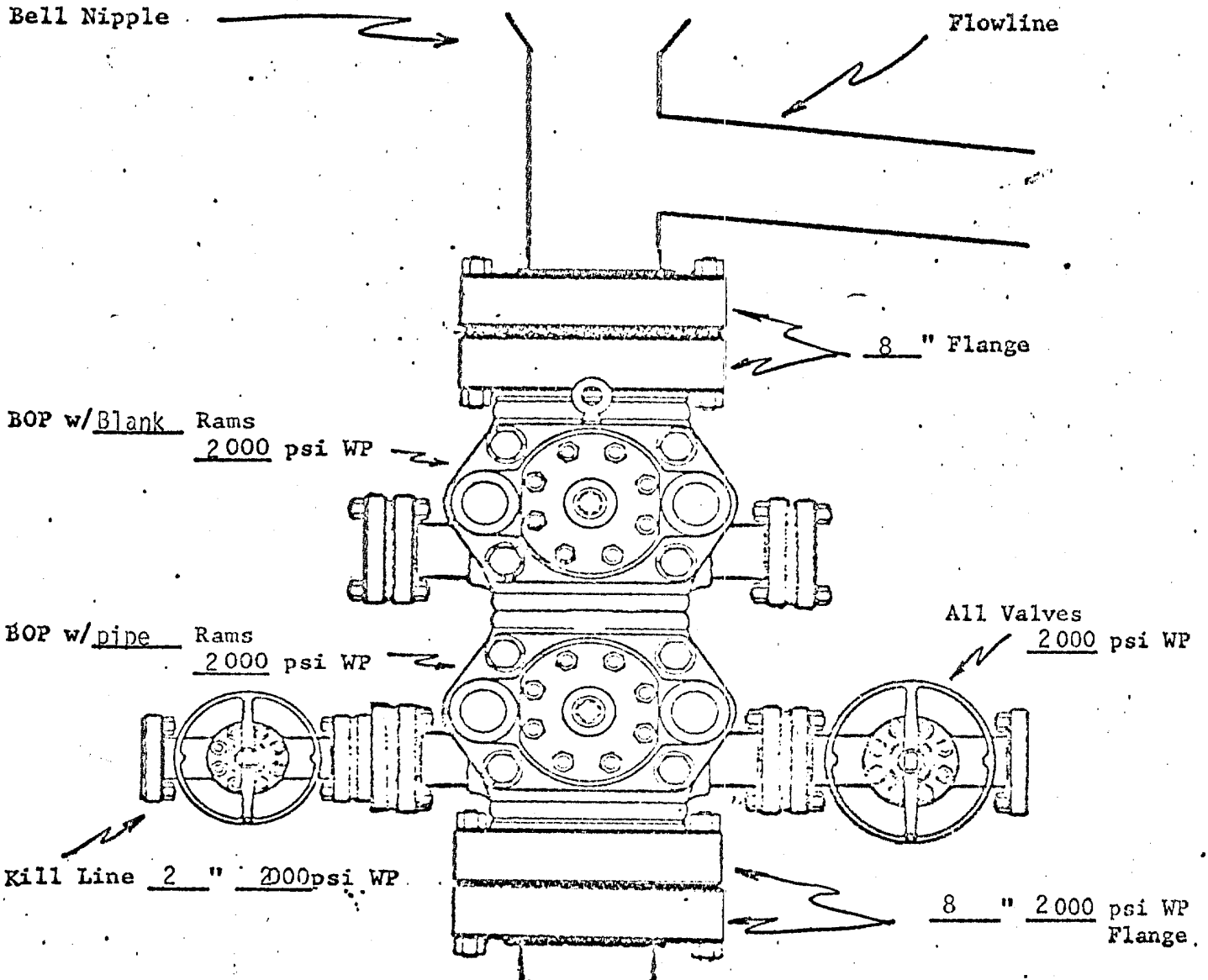
SCALE—4 INCHES EQUALS 1 MILE

SAN JUAN ENGINEERING COMPANY, FARMINGTON, N. M.

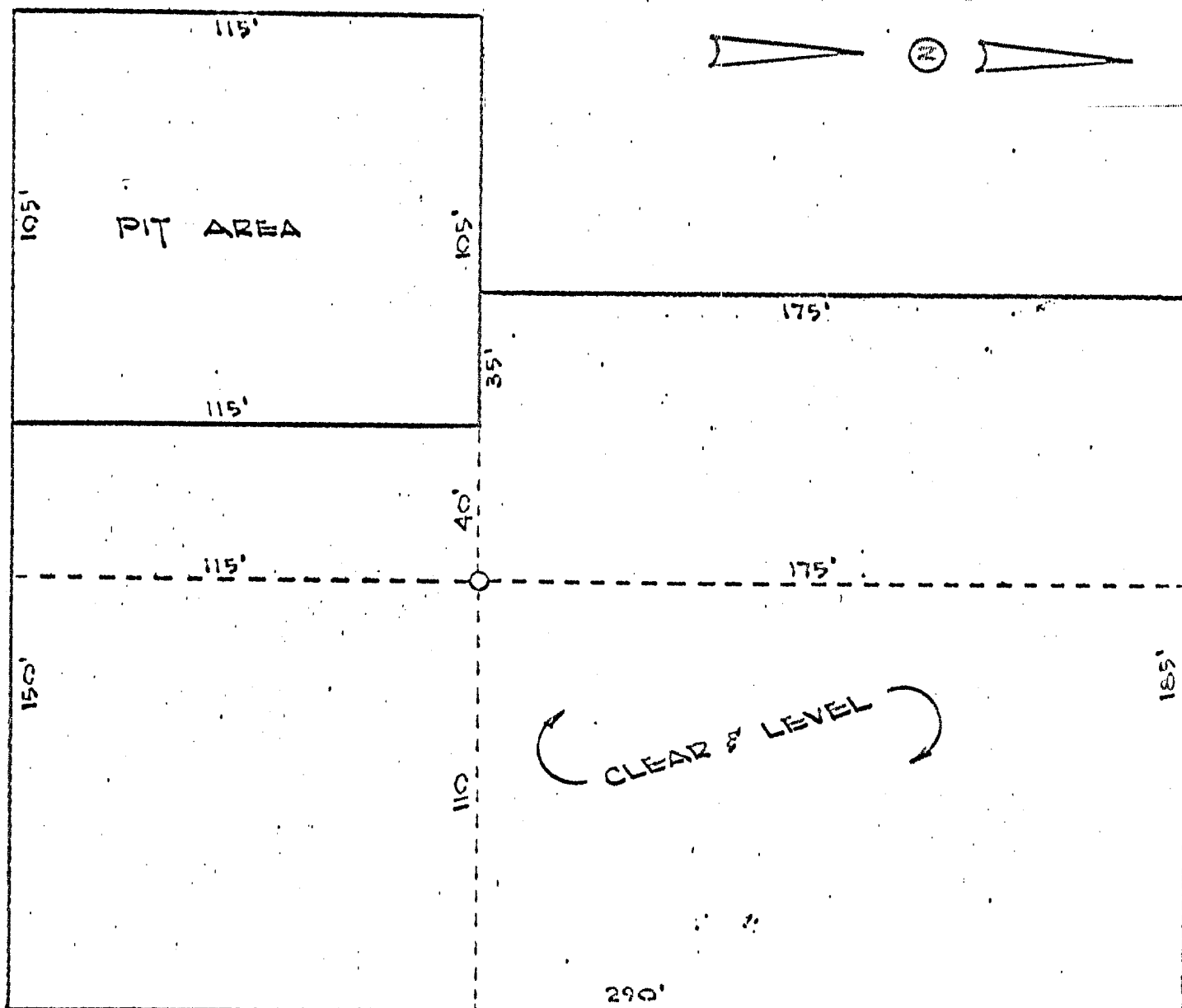
1463

Certificate No.

PROPOSED BOP STACK
8-5/8 " CASING



W. M. GALLAWAY
 Delo #12
 NE/4, SW/4, Sec. 26,
 T25N, R11W,
 San Juan County, New Mexico



W. M. GALLAWAY
 Delo #12
 NE/4, SW/4, Sec. 26,
 T25N, R11W,
 San Juan County, New Mexico
 Scale: 1" = 40'

W. M. GALLAWAY
101-2 Petroleum Plaza Building
Farmington, New Mexico 87401

MULTI-POINT SURFACE USE PLAN FOR
DRILLING OPERATIONS ON FEDERAL LEASES

Lease Name Delo Well No. 12
Well Location 2222' FSL, 1562' FWL, Sec. 26, T25N, R11W
Field Bisti Gallup
County San Juan State New Mexico

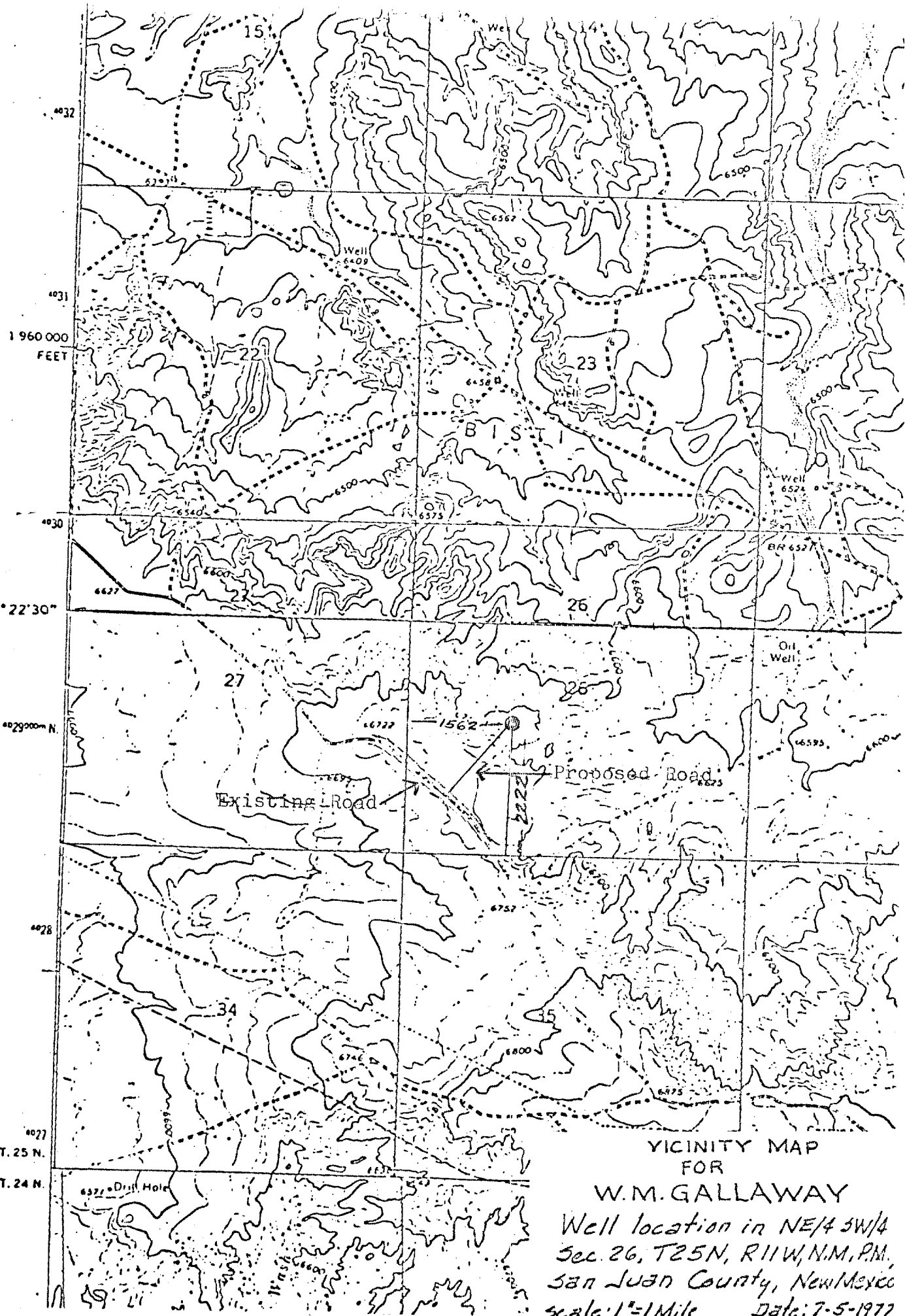
- 1.* Existing roads including location of the exit from main highway.
- 2.* Planned access roads.
- 3.* Location of wells.
- 4.* Lateral roads to well location.
5. Location of tank batteries and flow lines. If needed will be 100' from well painted brown, #595-30318.
6. Location and types of water supply: Water will be trucked to well site.
7. Methods for handling waste disposal: Waste will be burned or buried.
8. Location of camps: None
9. Location of air strips: None
10. Location layout to include position of rig, mud tanks, reserve pits, burn pits, pipe racks, etc: See attached diagram of proposed layout.
11. Plans for restoration of the surface: Pits will be backfilled and leveled to original grade. Location will be seeded according to B.L.M. seeding requirements.
12. Any other information that may be used in evaluating the impact on environment: Location falls on top of bluff with very little vegetation. Road to location is across sage brush flat. Grade in road will require one water bar.

* Shown on attached map.

I hereby 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 W. M. Gallaway and his contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved.

7-11-77
Date

W. M. Gallaway
W. M. Gallaway, Operator



4032
4031
1 960 000
FEET

36° 22' 30"

4029 000 N

4027
T. 25 N.
T. 24 N.

VICINITY MAP
FOR

W.M. GALLAWAY

Well location in NE/4 SW/4
Sec. 26, T25N, R11W, N.M.P.M.,
San Juan County, New Mexico
Scale: 1"=1 Mile Date: 7-5-1977

W. M. GALLAWAY
INVESTMENTS
101-2 PETROLEUM PLAZA BLDG.
FARMINGTON, NEW MEXICO 87401
505 . 325.6771

September 28, 1977

New Mexico Oil Conservation Commission
1000 Rio Brazos Road
Aztec, New Mexico 87410

Re: Delo #12, Bisti Gallup
W/2, Sec. 26, T25N, R11W,
San Juan County, New Mexico

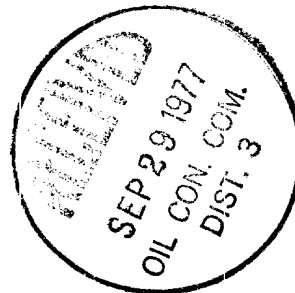
Gentlemen:

The following deviation tests were made on the captioned well during drilling:

© 215', 1/2 degree
© 2054', 3/4 degree
© 2938', 1 1/4 degrees
© 4177', 1 1/2 degrees
© 4842', 1 3/4 degrees
© 5325', 1 1/4 degrees

Very truly yours,

W. M. Gallaway
W. M. Gallaway
Operator



State of New Mexico }
County of San Juan } ss.

The foregoing instrument was acknowledged before me this 28th day of September, 1977 by W. M. Gallaway.

Jo Joek
Notary Public in and for
the County of San Juan,
State of New Mexico

My Commission Expires: 7/15/80

OPEN FLOW TEST DATA

DATE Sept. 15, 1977

Operator <u>W. M. Gallaway</u>		Lease <u>Delo #12</u>	
Location <u>2222'S, 1562'W, Sec. 26, T25N, R11W</u>		County <u>San Juan</u>	State <u>New Mexico</u>
Formation <u>Gallup</u>		Pool <u>Bisti</u>	
Casing: Diameter <u>4.500</u>	Set At: Feet <u>5312.32'</u>	Tubing: Diameter <u>2.375</u>	Set At: Feet <u>5261.60'</u>
Pay Zone: From <u>5156'</u>	To <u>5161'</u>	Total Depth: <u>5321'</u>	Shut In <u>9-1-77</u>
Stimulation Method <u>Sand water frac</u>		Flow Through Casing <u>XX</u>	Flow Through Tubing

Plate Casing Size, Inches <u>3/4"</u>		Choke Constant: C			
Shut-In Pressure, Casing, PSIG <u>274</u>	+ 12 = PSIA <u>286</u>	Days Shut-In <u>14</u>	Shut-in Pressure, Tubing PSIG <u>Pump Jack</u>	+ 12 = PSIA	
Flowing Pressure: P PSIG <u>21</u>	+ 12 = PSIA <u>33</u>		Working Pressure: P _w PSIG	+ 12 = PSIA	
Temperature: T = <u>60 °F</u>	n = <u>0.75</u>		F _{pv} (From Tables)	Gravity F _g =	

$$\text{CHOKE VOLUME} = Q = C \times P_i \times F_i \times F_g \times F_{pv}$$

Q = Calculated from orifice well tester chart

= 411 MCF/D

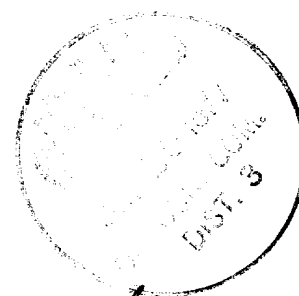
$$\text{OPEN FLOW} = Aof = Q \left(\frac{P_c^2}{P_c^2 - P_w^2} \right)^n$$

$$Aof = \left(\frac{P_c^2}{P_c^2 - P_w^2} \right)^n =$$

Aof = 411 MCF/D

TESTED BY H. E. McAnally

WITNESSED BY W. M. Gallaway



W. M. Gallaway
W. M. Gallaway



El Paso NATURAL GAS
COMPANY

Memorandum

TO: L. M. Parrish, Jr.
FROM: Production Department

DATE: September 19, 1977
PLACE: Farmington, N. M.

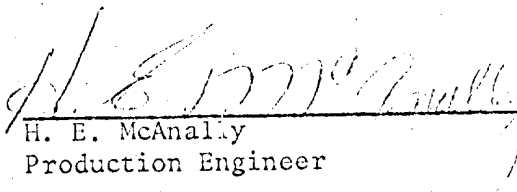
Re: W. M. Gallaway Delo #12 well, which is
located 2222'/S, 1562'/W, Sec. 26, T25N,
R11W, San Juan County, New Mexico completed
as a Bisti Gallup gas well.

A shut-in pressure of 274 psig was measured on the casing and a 2" Merla orifice well tester was installed on the casing with a 3/4" plate and a pressure recorder to record the pressure maintained. The casing was turned on through the orifice well tester. The well stabilized after one hour at 21 psig for a period of eight hours when the wellbore started filling with liquid and the well started logging off for the next four hours. At this point the tubing was pumped and the test was continued for an additional 24 hour period. The gas production increased after the pump was started and the pressure stabilized at 21 psig again. This indicated the well has the ability to produce 411 MCF/D at a line pressure of 21 psig.

No gas sample was caught at the time of the test therefore, no gravity can be reported.

This test was conducted at the request of Mr. Gallaway for the purpose of attempting to connect this well to our low pressure system in the area.

If there is any further information needed, please let me know.


H. E. McAnally
Production Engineer

HEM:al

cc: R. E. Johnson
C. E. Matthews
W. M. Rodgers
D. O. Vilven
File

