Form 9-331 C
(May 1963)

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1425.

30-045-23512

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

5. LEASE DESIGNATION AND SERIAL NO.: NM-0338690

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7. UNIT AGREEMENT NAME:

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

b. TYPE OF WELL: OIL WELL [ ] GAS WELL [XX] OTHER — SINGLE ZONE [XX] MULTIPLE ZONE [ ]

8. FARM OR LEASE NAME: Federal Com

2. NAME OF OPERATOR: CURTIS J. LITTLE

9. WELL NO.: 2-R

3. ADDRESS OF OPERATOR: P. O. Box 2487, Farmington, New Mexico 87401

10. FIELD AND POOL, OR WILDCAT: Basin Dakota

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.*)
At surface: 1000'FSL 50'FEL
At proposed prod. zone:

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 11 T-28-N R-13-W

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE*: 3 miles South of Farmington

12. COUNTY OR PARISH: San Juan | 13. STATE: N.M.

15. DISTANCE FROM PROPOSED* LOCATION TO NEAREST PROPERTY OR LEASE LINE, FT. (Also to nearest drlg. unit line, if any)	50'	16. NO. OF ACRES IN LEASE: 275.36	17. NO. OF ACRES ASSIGNED TO THIS WELL: 344.28
18. DISTANCE FROM PROPOSED LOCATION* TO NEAREST WELL, DRILLING, COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT.	2160	19. PROPOSED DEPTH: 6300'	20. ROTARY OR CABLE TOOLS: Rotary

21. ELEVATIONS (Show whether DF, RT, GR, etc.): 5754 GR

22. APPROX. DATE WORK WILL START*: 6-1-79

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	24#	160	100 sx
7-7/8	4-1/2	10.5#	6300	600 sx

This well will be drilled with mud, mechanical logs run at TD and the Dakota sands selectively perforated and fractured. 10" 3000 psi BOP with blind and pipe rams will be operational at all times while drilling. 6" 3000 psi double gate manual BOP will be utilized for completion. A DV tool will be set at the base of the Mesaverde for a 2-stage cement job on the long string.

The HBP Federal leases have an existing gas contract with El Paso Natural Gas Co.

MAY 8 1979
OIL CON. COM.
DIST.

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 Curtis J. Little — TITLE Operator — DATE May 4, 1979

Curtis J. Little

(This space for Federal or State office use)

PERMIT NO. _____ APPROVAL DATE _____

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

ok Frank

NMOCC - R-5462

*See Instructions On Reverse Side

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.
CURTIS LITTLE	FEDERAL	2-R

Unit Letter	Section	Township	Range	County
P	11	28 NORTH	13 WEST	SAN JUAN

Actual Footage Location of Well:
1000 feet from the SOUTH line and 50 feet from the EAST line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
5754	DAKOTA	Basin Dakota	Acres

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

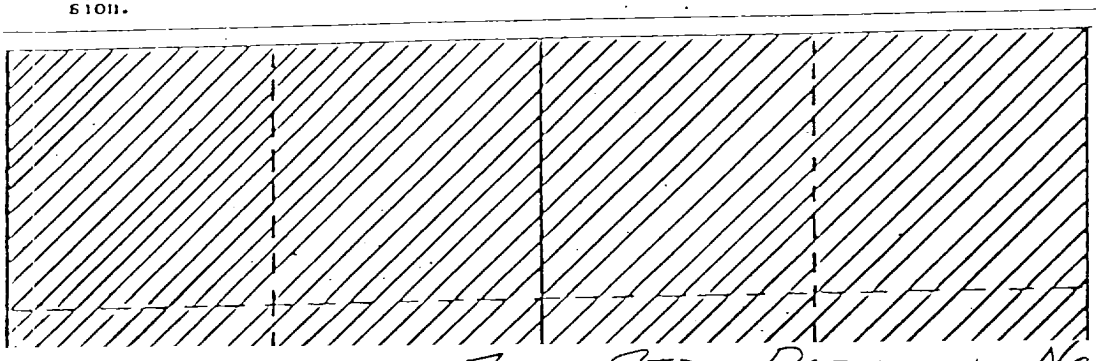
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

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?

[X] Yes [ ] No If answer is "yes," type of consolidation Forced Pooling 12-5962

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.



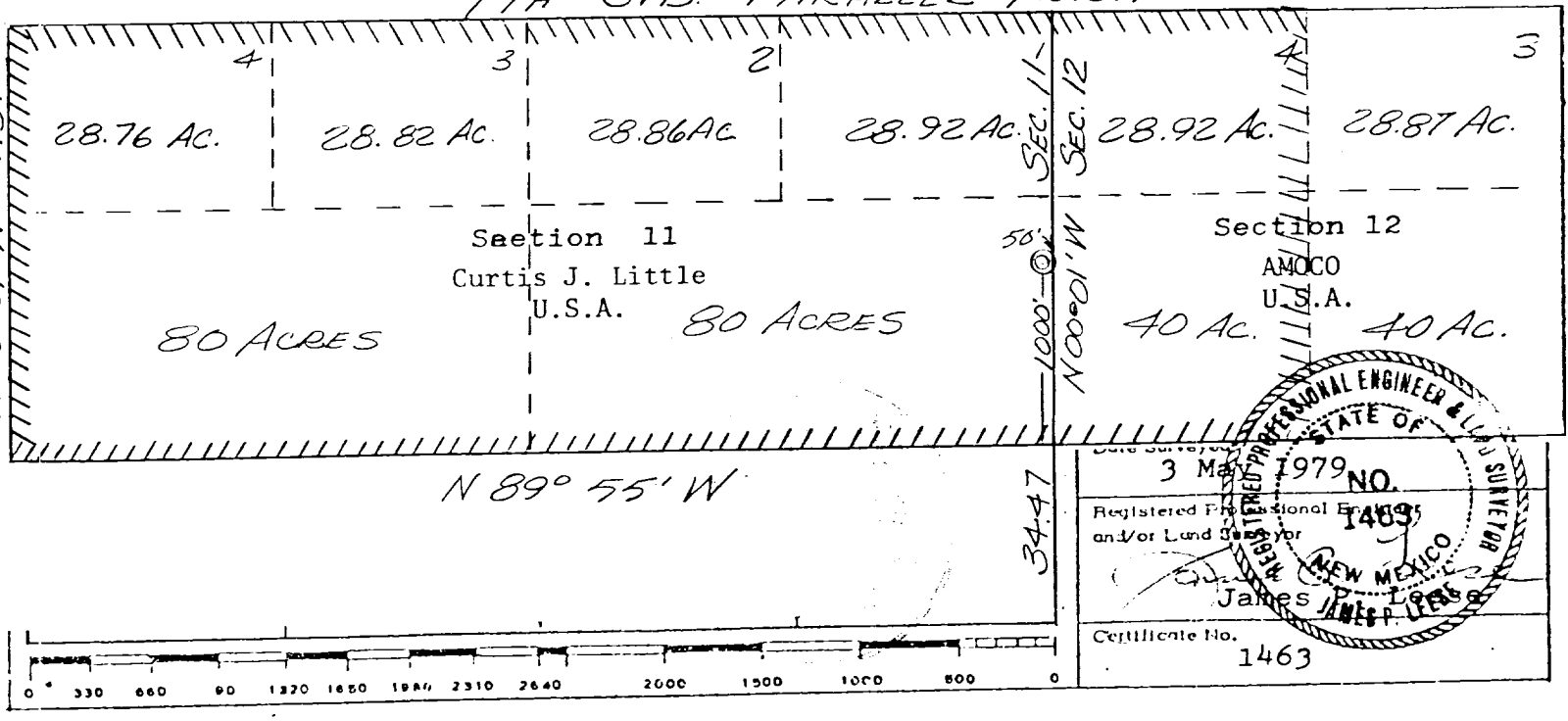
CERTIFICATION

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

Curtis J. Little

Name: Curtis J. Little

Position

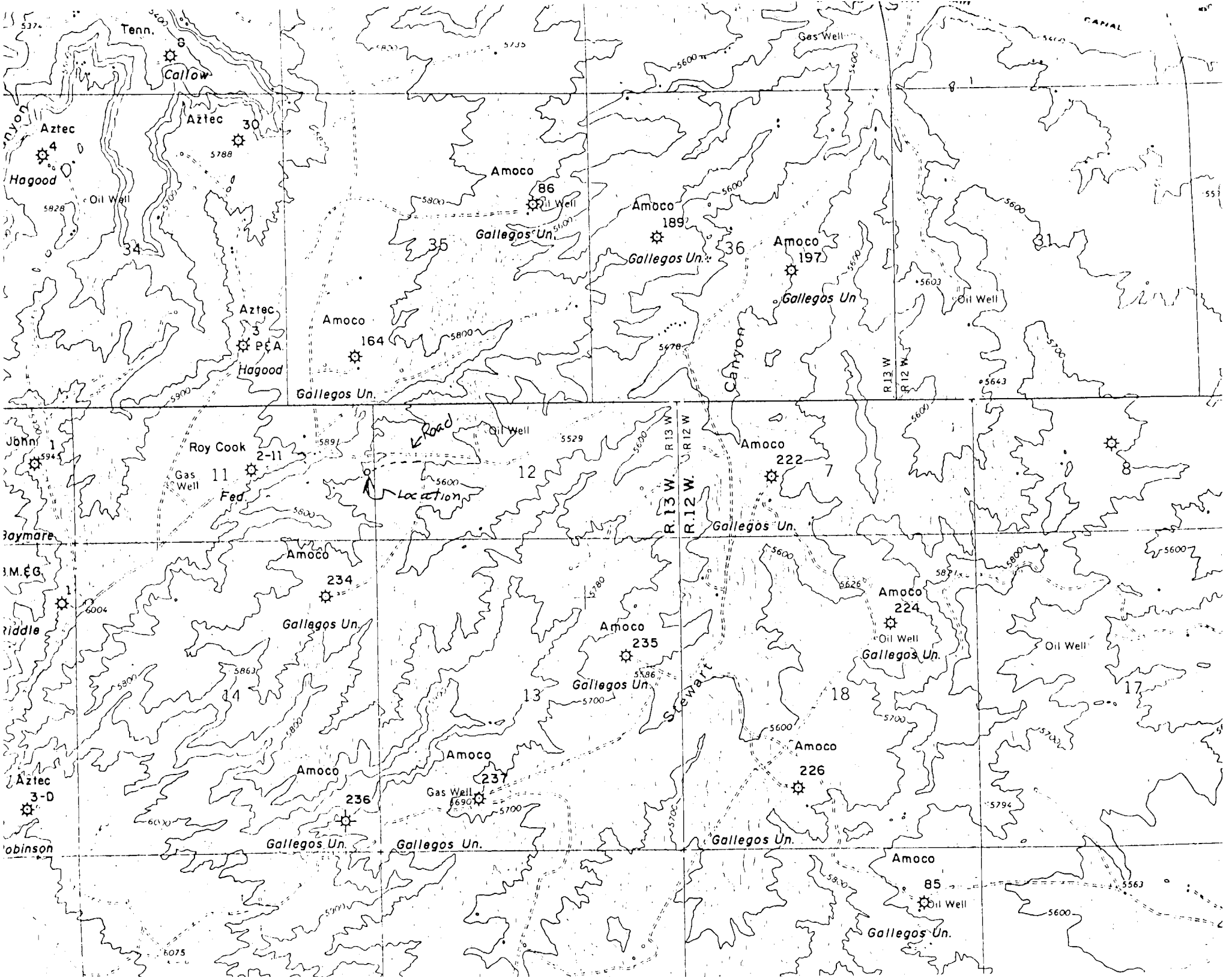


Date Surveyed: 3 May 1979

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

Certificate No. 1463

REGISTERED PROFESSIONAL ENGINEER & LAND SURVEYOR
STATE OF NEW MEXICO
NO. 1463
JAMES P. LEESE


Tenn.
8
Callow
Aztec
4
Hagood
Oil Well
5828
Aztec
30
5788
34
Amoco
86
Oil Well
Amoco
189
Gallegos Un.
35
Gallegos Un.
36
Amoco
197
Gallegos Un
Gas Well
31
Oil Well
5603
5643
Aztec
3
P&A
Hagood
Amoco
164
Gallegos Un.
Canyon
R 13 W
R 12 W
Road
Location
Oil Well
5529
Roy Cook
2-11
Gas Well
11
Fed.
12
Amoco
222
7
8
R. 13 W.
R. 12 W.
Gallegos Un.
Baymare
Amoco
234
Gallegos Un.
Amoco
235
Gallegos Un.
Stewart
13
14
18
17
Amoco
224
Oil Well
Gallegos Un.
Oil Well
Aztec
3-D
Amoco
236
Amoco
237
Gas Well
Amoco
226
Gallegos Un.
Gallegos Un.
Gallegos Un.
Amoco
85
Oil Well
Gallegos Un.

PLAN OF DEVELOPMENT

CURTIS J. LITTLE
No. 2-R Federal Com.
SE/4 SE/4 Section 11 , T-28-N R-13-W
San Juan County, New Mexico

1. Existing roads (see enclosed topo map).

2. Planned access road: approximately 300 feet of access road approximately 10' in width constructed to prevent erosion (see proposed road on topo map).

3. Location of wells (see topo map).

4. Location of tank battery and production facilities: If this well is productive, it would be gas; therefore, the facilities would be the wellhead, tanks for produced water and condensate, if any, separator and gas line to the well. The tanks and separator would be set within 150' of the well and the gas line would run adjacent and parallel to road.

5. Location and type of water supply: Water will be hauled by truck from the San Juan River in Farmington.

6. Source of construction materials: All construction material such as gravel, sand, timbers, etc. will be purchased and hauled to the location. No water, sand or gravel will be used from this land.

7. Methods for handling waste disposal:
   1) Cuttings will be buried 3' below the surface.
   2) Drilling fluids will be left in a fenced, open pit to evaporate.
   3) Produced oil or condensate (if any) will be stored in a tank.
   4) Portable toilet to be provided.
   5) Trash will be burned in burn pit.
   6) After pit area is sufficiently dry, cuttings will be pushed into pit and sub-soil will be placed on any remaining fluid and cuttings, then top soil, if any, will be placed over both pit and location area.

8. Ancillary facilities: No camps or airstrips will be used.

9. Wellsite layout: Top soil, if any, will be stockpiled and reused. Pits will not be lined.

10. Plans for restoration of surface: Upon completion of well, all pits will be backfilled and top soil replaced and recontoured back to the original terrain. Pits will be backfilled as soon as they evaporate enough to permit such work. Should it be necessary to protect livestock or wild game, pits will be fenced,

and maintained until clean-up operations are commenced. Should oil accumulate on the pit, it will be removed and buried 6' deep or overhead flagging will be employed to protect wildlife.

11. Other information:
    1) Topography - drillsite and access low valley profile.
    2) Vegetation - sparce grass and sagebrush with moderate growth of cedar trees.
    3) Land Use - land is used for grazing with no reservoir or water on this site. There are no known archeological, cultural, or historical sites on this site.

12. Lessee's or operator's representative: CURTIS J. LITTLE Home: 327-6673 Offc: 327-6176

13. 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 Four Corners Drilling Company and its contractors and sub-contractors in confirmity with this plan and the terms and conditions under which it is proposed.

Curtis J. Little
P. O. Box 2487
Farmington, New Mexico 87401

WELL CONTROL PLAN

CURTIS J. LITTLE
No. 2-R Federal Com.
SE/4 SE/4 Section 11 , T-28-N R-13-W
San Juan County, New Mexico

1. Surface Casing: 9-5/8" 36#/ft. Grade K-55, Short T&C, set at 160' and cemented with pump and plug method back to surface.

2. Casinghead Flange: 9-5/8" x 10-3/4" top 1500 psig W.P.Larkin (or equivalent) casinghead with two 2" 1500 psi L.P. outlets.

3. Blowout Preventor: An 8" 3000 psig W.P. double gate hydraulic Shaffer BOP (or equivalent) with drill pipe rams and blind rams. All fill, kill and choke lines will be minimum of 2" 2000 psi working pressure. The rams will be closed daily and checked for proper operation.

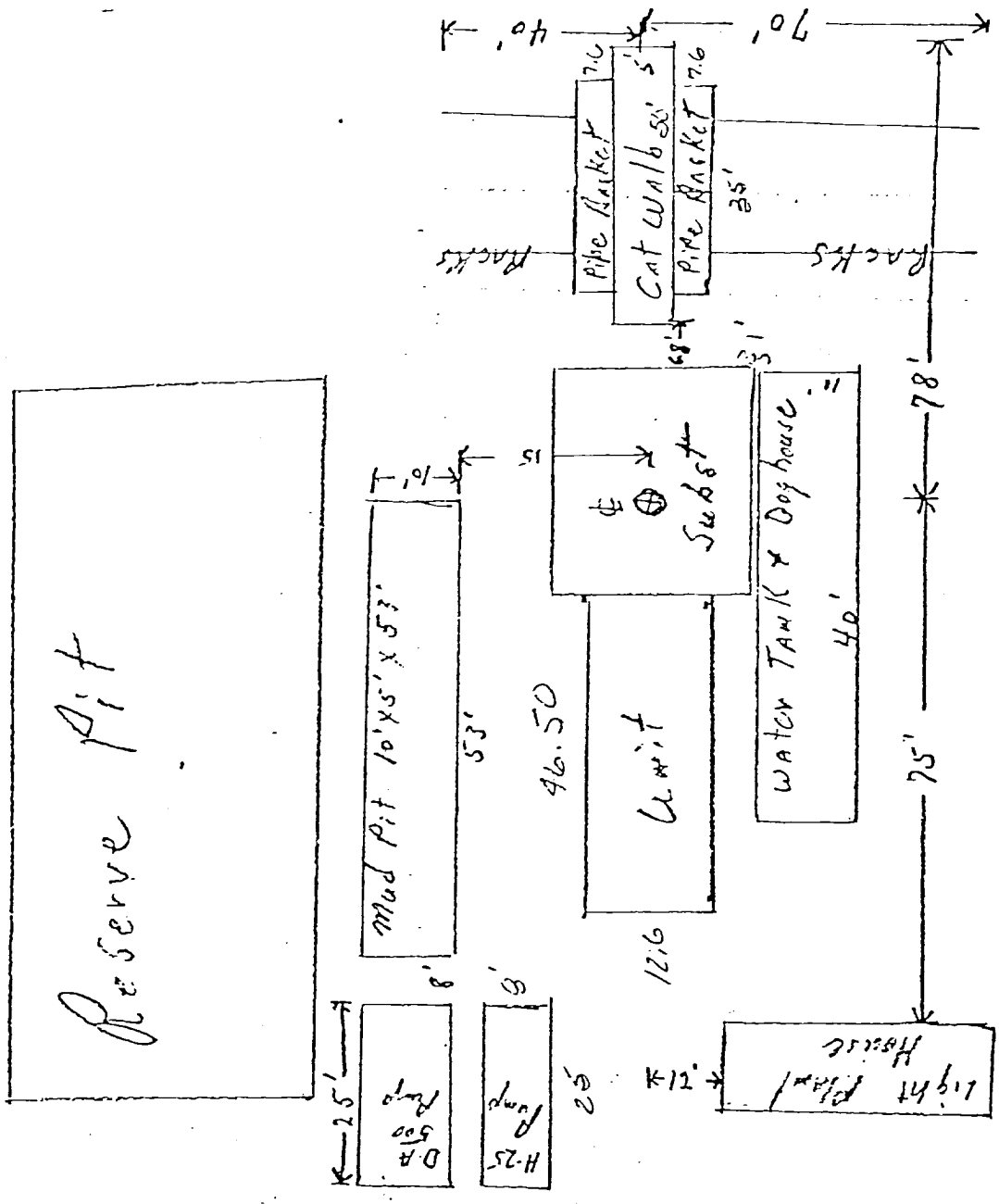
4. Auxillary Equipment: a) Drill pipe floats will be allowed at contractor's discretion; b) Visual and manual monitoring of mud system will be maintained.

5. Anticipated bottom hole pressure is less than 1800 psi at 6300' or a gradient of .277 psi/ft.

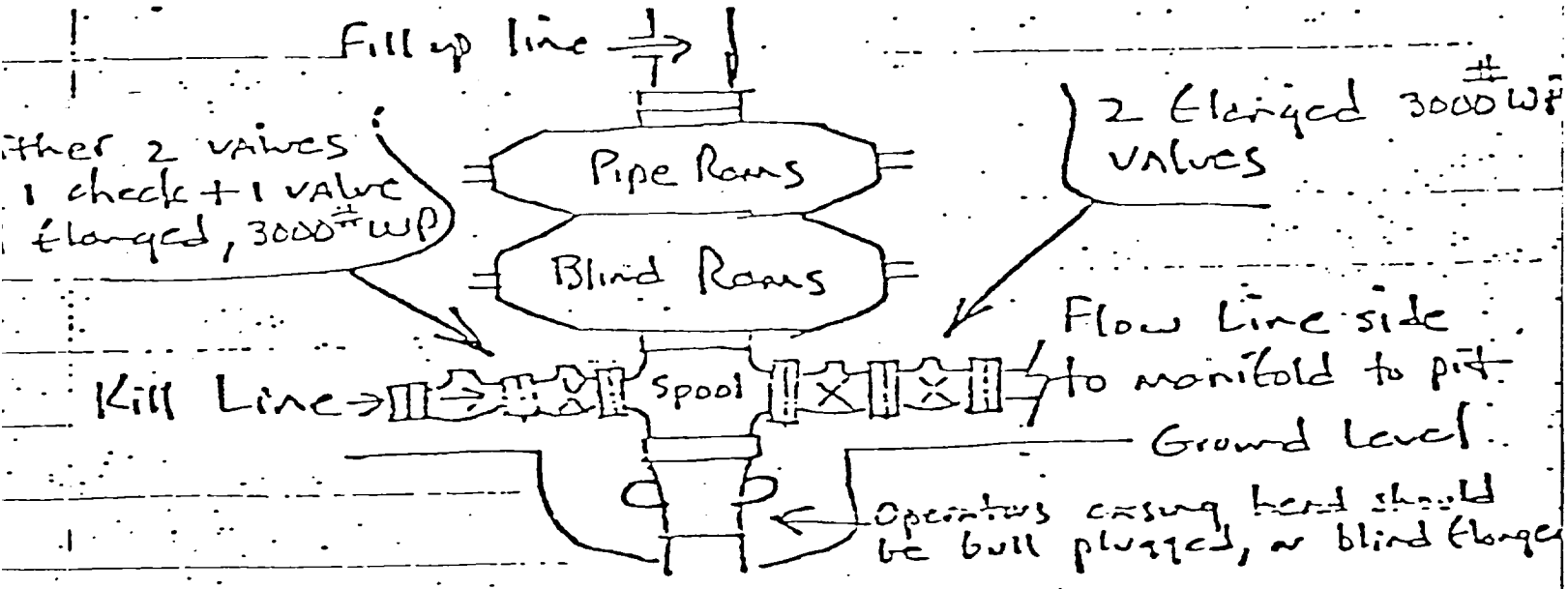
6. Well will be drilled with water base mud system with 8.8 - 9.0 ppg weight 35-45 seconds viscosity to T.D.

Curtis J. Little

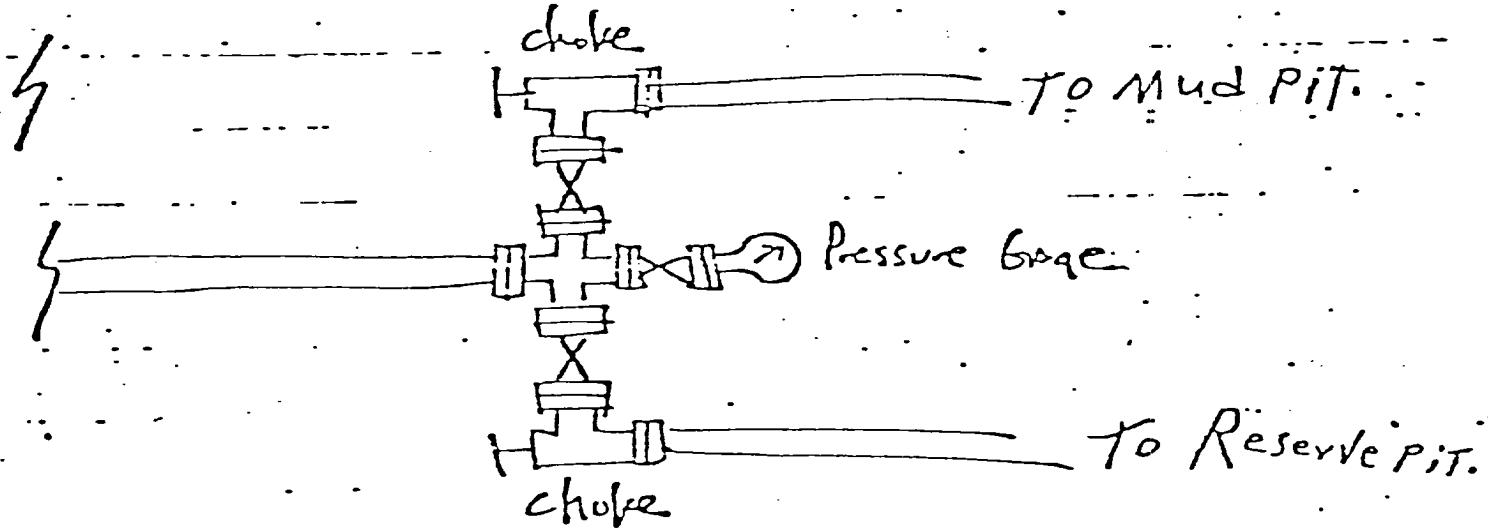
FOUR CORNERS DRILLING CO.
P. O. BOX 1067
702 E. BROADWAY
FARMINGTON, NEW MEXICO 87401
•
TELEPHONE: (505) 327-1122



BLOWOUT PREVENTOR EQUIPMENT



Detail Flow Line Side (manifold)
(All fittings flanged & WP at 3000#)



NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 6-1-65

Type Test: [X] Initial [ ] Annual [ ] Special				Test Date: 8-27-79	
Company: CURTIS J. LITTLE		Connection: El Paso Natural Gas Company			
Pool: Basin		Formation: Dakota		Unit	
Completion Date: 8-11-79	Total Depth: 6154'	Plug Back TD: 6120'	Elevation: 5648 KB	Farm or Lease Name: Federal Com.	
Csg. Size: 4.500 / Wt.: 10.5 / d: 4.052 / Set At: 6153		Perforations: From 5988 To 6085		Well No.: #2-R	
Tbg. Size: 2.375 / Wt.: 4.7 / d: 1.995 / Set At: 6070		Perforations: From To		Unit: M / Sec.: 12 / Twp.: 28N / Rge.: 13W	
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At		County: San Juan	
Producing Thru: Tubing	Reservoir Temp. °F: 6	Mean Annual Temp. °F	Baro. Press. – P_a	State: New Mexico	
L: 6070 / H	Gg: 0.650	% CO_2: 0	% N_2: 0	% H_2S: 0	Prover / Meter Run / Taps

FLOW DATA						TUBING DATA		CASING DATA		
NO.	Prover Line Size	X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI						1052	1360			
1.	Choke	0.750	81		63°		369			3 hours
2.										
3.										
4.										
5.										

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	12.365		93	0.9971	0.9608	1.008	1110
2							
3							
4							
5							

NO.	P_t	Temp. °R	T_r	Z
1				
2				
3				
4				
5				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas _____ XXXXXXXX
Specific Gravity Flowing Fluid XXXXXX _____
Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
Critical Temperature _____ R _____ R

P_c _____ P_c^2 1882384

NO	P_t	P_w	P_w^2	$P_c^2 - P_w^2$
1		381	145161	1737223
2				
3				
4				
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 1.0836$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1.0620$

$AOF = Q\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 1179$

Absolute Open Flow 1179 Mcfd @ 15.025 Angle of Slope θ _____ Slope, n 0.75

Remarks: _____

Approved by: _____ Conducted By: Curtis J. Little Calculated By: H. E. McAnally Checked By: