Form 3160-3
(July 1992)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

ROW/APD

FORM APPROVED
Budget Bureau No. 1004-0136
Expires: February 28, 1995

APPLICATION FOR PERMIT TO DRILL OR DEEPEN

5. Lease Designation and Serial No.: NOO-C-14-20-7472

6. If Indian, Allottee or Tribe Name:

1a. Type of Work: DRILL ☒ DEEPEN ☐

b. Type of Well: Oil Well ☐ Gas Well ☒ Other ☐ Single Well ☒ Multiple Zone ☐

7. If Unit or CA, Agreement Designation: 7764

2. Name of Operator: **Merrion Oil & Gas Corporation**

8. Well Name and No.: **Da On Pah No. 1R**

3. Address and Telephone No.: 610 Reilly Ave Farmington NM 87401
ph: (505) 327-9801

9. API Well No.: 30-045-30813

4. Location of Well (Footages)
At Surface: 1725' fnl & 1300' fel (se ne)
At proposed prod. zone: Same

10. Field and Pool, or Explatory Area: Basin Fruitland Coal

11. Sec., T., R., M., or BLK. and Survey or Area: H Section 35, T27N, R12W

14. Distance in Miles and Directions from Nearest Town or Post Office: 18 miles south of Farmington NM, near Chaco Plant

12. County or Parish: San Juan

13. State: NM

15. Distance from Proposed Location to Nearest Property or Lease Line, Ft (Also to nearest drlg. unit line, if any)	16. No. of Acres in Lease	17. No. of Acres Assigned to This Well
1050'	160 acres	160 acres NE/4
18. Distance from Proposed Location to Nearest Well Drilling, Completed, or Applied for, on this Lease, FT	**19. Proposed Depth**	**20. Rotary or Cable Tools**
+/-305'	1540'	Rotary
21. Elevations (Show whether DF, RT, GR, etc)		**22. Approximate Date Work will Start**
5948' GR, 5953' RKB		As soon as permitted

APR 2002
RECEIVED
OIL CON. DIV.
DIST. 3

PROPOSED CASING AND CEMENTING PROGRAM

SIZE OF HOLE	SIZE & GRADE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
8-3/4"	7" J55	23 ppf	~120' KB	~30 sx (36 cuft)
6-1/4"	4-1/2" J55	10.5 ppf	~1540' KB	~119 sx (185 cuft)

Merrion proposes to drill 8-3/4" hole with native mud to approx 120' and set 7" 23# J55 surface casing , cement to surface with ~30 sx 'B' w/ 2% CaCl2 (36 cuft). Will drill 6-1/4" hole to TD @ approx 1540' KB with low solids non-dispersed mud system. Run open hole surveys. Will set 4-1/2" 10.5 ppf J55 production casing from TD to surface. Will cement with 51 sx 'B' w/ 2% SMS (104 cuft) and tail in with 68 sx 'B' (81 cuft) cement to fill from total depth to surface. Top of Cement should circulate to surface (will adjust volumes based upon caliper log).

A ~5 bbl water spacer will be pumped ahead of the lead slurry to prevent mud contamination of the cement.. If cement does not reach surface, a temperature log or cement bond log will be run to determine top of cement.

Will test Fruitland through perforated casing. Will fracture stimulate and put on for production test. Drilling operations below surface casing will be conducted with a Bag type BOP in place, minimum working pressure 1000 psig. Additional drilling technical details attached.

The well will be drilled as a replacement for the Da On Pah No. 1 approximately 300' away. The road and pipeline for the Da On Pah will be used. Approval for any additional pipeline and road right of way to connect to the Da On Pah No. 1 is also proposed as part of this APD as marked on the enclosed topo map.

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4.

OPERATOR SHALL BE CONFORMED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposal to deepen, give present productive zone and proposed new productive zone. COPIES: BLM+7, WELL FILE+1

24. I hereby certify that the foregoing is true and correct

Signed Connie S. Dinning Title Production Engineer Date August 15, 2001

(This space for Federal or State office use)

Permit No. _____ Approval Date 4/5/02

Application approval does not warrant or certify that applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Conditions of approval, if any:

APPROVED BY: /s/ David J. Mankiewicz TITLE AFM DATE 4/5/02

HOLD C104 FOR Status change to Da On Pah #1

District I
PO Box 1980, Hobbs, NM 88241-1980
District II
PO Drawer DD, Artesia, NM 88211-0719
District III
1000 Rio Brazos Rd., Aztec, 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-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-045-30813	71629	Basin Fruitland Coal

[4] Property Code	[5] Property Name	[6] Well Number
7764	Da On Pah	1 R

[7] OGRID No.	[8] Operator Name	[9] Elevation
014634	MERRION OIL & GAS CORPORATION	5948'

[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
H	35	27 N.	12 W.	SENE	1725	North	1300	East	San Juan

[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

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
160			NSP 1574

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

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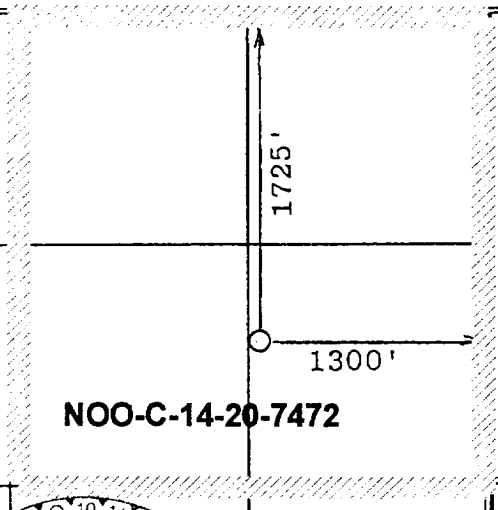
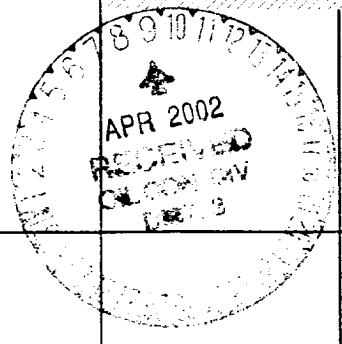




[17] OPERATOR CERTIFICATION

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

Signature: Connie S. Dinning

Printed Name: Production Engineer

Title: August 15, 2001

Date

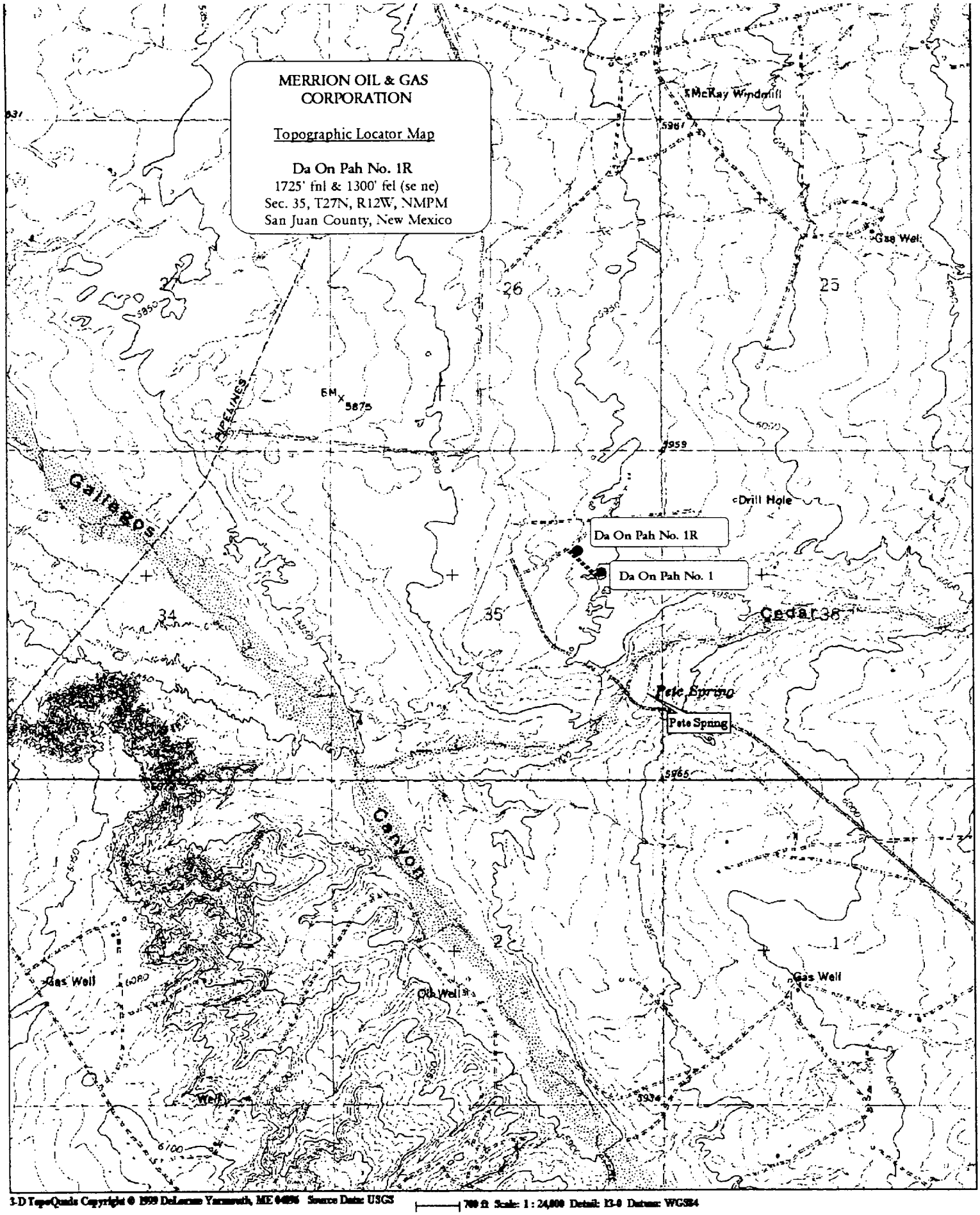
[18] SURVEYOR CERTIFICATION

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 belief.

Date of Survey: DECEMBER 21, 1998

Signature and Seal of Professional Surveyor:

Certificate Number



700 ft Scale: 1 : 24,000 Detail: 13-0 Datum: WGS84

MERRION OIL & GAS CORPORATION

DRILLING TECHNICAL PROGRAM

(Attachment to Form 3160-3)

Da On Pah No. 1R

1725' fnl & 1300' fel (se ne)
Section 35, T27N, R12W, NMPM
San Juan County, New Mexico

1. ESTIMATED FORMATION TOPS:

FORMATION	DEPTH KB	EST PSI
Undif. Tertiary	Surface	
Ojo Alamo	340'	
Kirtland Shale	487'	
Fruitland	855'	
Main Fruitland Coal	1368'	356 psi
Pictured Cliffs	1386'	360 psi
Total Depth	~1540'	

2. WELL CONTROL SYSTEM

A. Proposed blowout preventer system (schematic drawings attached) is a Bag type preventer, and will be used in 1000 psi service. Merrion requests a waiver from O&G Order No. 2 requirements for 2M service because the well is shallow and low pressure, with the surface pressure not expected to exceed ~400 psig at the wellhead. Such moderate conditions lower any chance of uncontrolled gas flow.

B. Minimum required working pressure rating for BOP stack is 1000 psi. Maximum anticipated bottomhole pressure = 400 psi. Well Control Anticipated Surface Pressure (ASP) = 400 psi - (0.22 * 1540') = 61 psi, assuming a partially gas cut column per BLM guidelines.

C. BOP pressure testing will be conducted at time of installation and prior to drillout of surface casing shoe. Bag type preventer will be tested to 250 psi. The BOPs will be activated on each trip for a bit and recorded in the driller's log. A choke manifold will be installed (Refer to schematic drawing). Working pressure for choke manifold is minimum 1000 psi. In addition, a kill line from the mud pump will be installed.

D. Stabbing valves for drill pipe and drill collars will be available. Merrion requests an exception to the requirement for an upper kelly cock valve to be utilized during drilling; pull-down type rig to be used will not allow use of kelly cock valve.

E. Anticipated formation pressures average 0.26 psi/ft gradient and formation fracture pressures are anticipated to exceed the maximum mud weight of 9.1 ppg.

3. DRILLING MUD PROGRAM

A. A 8-3/4" surface hole will be drilled with fresh water system, lime and gel added to provide viscosity as needed.

B. A 6-1/4" hole will be drilled to total depth utilizing a low solids non-dispersed mud system. Additives such as starch, cmc, and others will be used to control mud characteristics as necessary. No materials of a hazardous nature will be added to the drilling fluid in hazardous quantities. Lost circulation materials will not be stored on location. Mud weighting materials will not be stored on location.

INTERVAL	*MUD SYSTEM*	*WEIGHT #/GAL*	*VISCOSITY SEC/QT*	*WATER LOSS CC*
0 - 120'	Native	< 9.0	35-55	NA
120' - 1540'±LSND	8.6-9.1	28-45	NA	

Maximum anticipated mud weight is 9.1 lb./gal (0.47 psi/ft).

C. Mud trip monitoring will be done visually.

4. HAZARDS

A. Abnormal Pressure is not expected to be a problem in this area.

B. Lost circulation is not expected to be a problem in this area.

C. No H_2S is expected. However, should H_2S be found during drilling, detection and warning equipment will be installed.

D. Unintentional hole deviation is not expected to be a problem. Single shot surveys giving hole inclination will be run a minimum of every 500 feet.

5. LOGGING AND TESTING

A. An Induction, Density Log will be run from TD across zones of interest.

B. Drill stem tests will not be run.

C. No coring is anticipated.

D. A mud logging unit may be used during drilling.

6. CASING PROGRAM

A. Casing:

	Description	Top	Bottom
1	7" 23# J55	Surface	120 ft ±
2	4-1/2" 10.5# J55	Surface	1540 ft ±

Merrion requests that a variance be granted to allow us to set surface casing at the proposed depth of ± 120' because this setting depth has been shown to be adequate as demonstrated by the inumberable wells that have been previously drilled in the area without incident. In addition, the potential for a gas kick is very low.
Estimated formation pore pressure gradient is ~0.26 psi/ft.

B. A proposed wellbore schematic is attached.

Merrion Oil & Gas Corporation
Wellbore Schematic

Da On Pah No. 1R

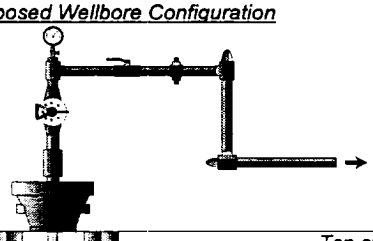
Proposed Wellbore Configuration

Location: 1725' fnl & 1300' fel (se ne)
Sec 35, T27N, R12W,NMPM
San Juan County, New Mexico

Date: May 15, 2000

Elevation: 5948' GL
5953' RKB

Prepared by: Connie Dinning



Undif. Tertiary - Surface

Top of Cmt @ Surface

Surface Bit Size - 8-3/4"

Ojo Alamo - 340'
Kirtland - 487'

7" 23# Surface @ 120' KB w/ 30 sx Class B Cement, Circ to Surface

Cretaceous

Bit Size 6-1/8"

Fruitland - 855'

2-3/8" EU 4.7# J55 Prod Tubing @ 1395' KB

Main Coal -1368'

Fruitland Coal Perfs: 1370' - 1390' KB, 3 spf, 60 holes total

Pictured Cliffs -1386'

4-1/2" 10.5# J55 LTC Production Csg @ 1540' w/ 51 sx (104 cf) Cl. B w/ extender followed by 68 sx (81 cf) Cl. B neat. Circ to Surface.

TD @ 1540' KB PBTD @ 1500' KB