Submitted in lieu of Form 3160-5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

1. **Type of Well**
GAS

2. **Name of Operator**
MERIDIAN OIL

3. **Address & Phone No. of Operator**
PO Box 4289, Farmington, NM 87499 (505) 326-9700

4. **Location of Well, Footage, Sec., T, R, M**
990'FNL, 1190'FEL, Sec.27, T-26-N, R-6-W, NMPM

5. **Lease Number**
SF-079266

6. **If Indian, All. or Tribe Name**

7. **Unit Agreement Name**

8. **Well Name & Number**
Vaughn #13

9. **API Well No.**
30-039-20371

10. **Field and Pool**
Blanco MV/Basin DK/
WC;Ensenada Mesa Gal

11. **County and State**
Rio Arriba Co, NM

12. **CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA**

Type of Submission
_X_ Notice of Intent
___ Subsequent Report
___ Final Abandonment

Type of Action
___ Abandonment
_X_ Recompletion
___ Plugging Back
___ Casing Repair
___ Altering Casing
___ Other -
___ Change of Plans
___ New Construction
___ Non-Routine Fracturing
___ Water Shut off
___ Conversion to Injection

13. **Describe Proposed or Completed Operations**

It is intended to workover the subject wellbore according to the attached procedure, pertinent data sheet, and wellbore diagram. The Dakota will be temporarily abandoned, the Gallup and the Mesaverde will be recompleted and commingled after an extended flow period per the blanket downhole commingle order R-10239 dated November 14, 1994. This work will occur in the 1995 calendar year.

RECEIVED
DEC 19 1994
OIL CON. DIV.
DIST. 3

14. **I hereby certify that the foregoing is true and correct.**

Signed *[signature]* (TEM3)Title Regulatory Affairs Date 12/7/94

(This space for Federal or State Office use)
APPROVED BY ____________ Title ____________ Date ____________
CONDITION OF APPROVAL, if any:

Hold C-104 for Gallup NSL & +130 Chg to 13 M

APPROVED
DEC 12 1994
DISTRICT MANAGER

NMOCD

~~HOLD C-104 FOR~~
NSL Ltr to the BLM

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-
Revised February 21, 1
Instructions on b
Submit to Appropriate District Of
State Lease - 4 Co
Fee Lease - 3 Co

☐ AMENDED REPC

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number	² Pool Code	³ Pool Name
30-039-20371	72319/96321/71599	Blanco Mesaverde/Ensenada Mesa Gal/Basin Dakota

⁴ Property Code	⁵ Property Name	⁶ Well Number
7227	VAUGHN	13

⁷ OGRID No.	⁸ Operator Name	⁹ Elevation
14538	MERIDIAN OIL INC.	6670'

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
A	27	26-N	6-W		990	NORTH	1190	EAST	R.A.

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.
E/320-E/320-40			

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

16*Not resurveyed, prepared from a plat by David O. Vilven. Dated March 30, 1970.

990'
1190'

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DIST. 3

27

¹⁷ OPERATOR CERTIFICATIC

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

Signature
Peggy Bradfield
Printed Name
Regulatory Affairs
Title
12-12-94
Date

¹⁸ SURVEYOR CERTIFICATIC

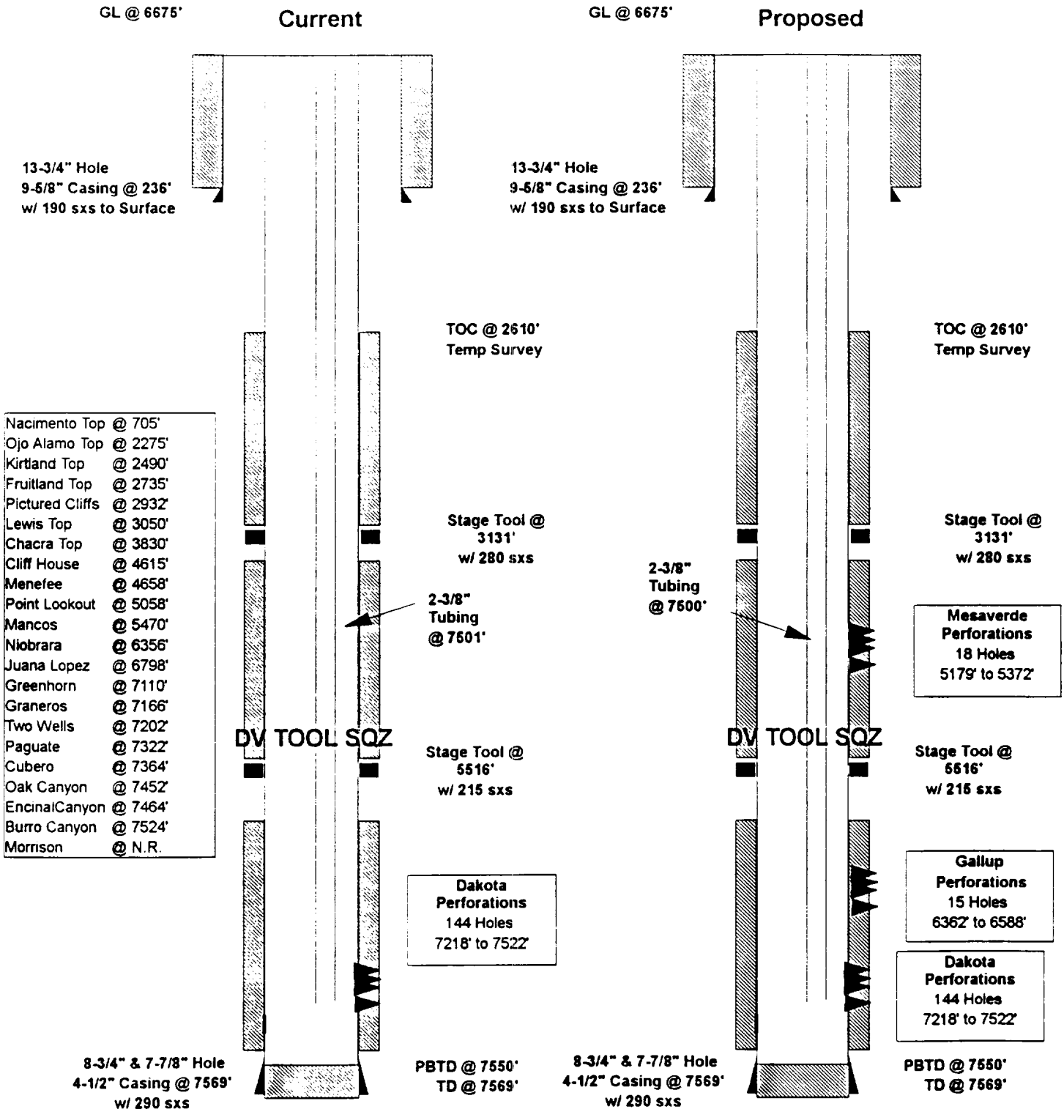
I hereby certify that the well location shown on this p was plotted from field notes of actual surveys made b or under my supervision, and that the same is true an correct to the best of my belief.

11-30-94
Date of Survey
Signature and Seal of Professional Surveyer:
NEALE C. EDWARDS
NEW MEXICO
9857
6857
REGISTERED LAND SURVEYOR
Certificate Number

Vaughn # 13

T26NR06W27A

Mesaverde, Gallup, &
Dakota Workover



This well will be commingled in the Mesaverde, Gallup and Dakota. An allocation Formula will be finalized after a 3 month online sales testing period. MOI will work with the NMOCD in developing this allocation formula. Prior to commingle, the Gallup & Dakota will be Temporarily Abandoned under a cast iron bridge plug, while the Mesaverde will be produced separately to help determine commingled production.

Meridian Oil Inc.
11-08-94/ TEM

Meridian Oil Inc.
11/08/94

Pertinent Data Sheet - Vaughn # 13

Location: Unit A, Section 27, T26N, R06W, 990' FNL, 1190' FEL — Rio Arriba County, New Mexico

Field: Basin Dakota

Elevations: 6675 ' GL, ' KB

TD: 7569'

PBTD: 7550'

Completed: 11-02-71

Spud: 05-23-71

DP #: 44728A (DK)

GWI: 100.00 %

NRI: 68.250 %

Casing Record:

Hole Size	Casing Size	Wt & Grade	Depth Set	Sxs Cement	TOC	
13-3/4"	9-5/8"	32.3# H-40	236'	190	Surface	6 jts, Class A cement
8-3/4"	4-1/2"	11.6# J-55	7569'	#1 290 sxs		1074' of 11.6#
to 7-7/8"	4-1/2"	10.5# J-55	DV@ 5516'	#2 215 sxs		6495' of 10.5#
@ 5536'	4-1/2"	"	DV@ 3161'	#3 280 sxs	2610'	Temp

Tubing & Rod Record:

Tubing Size:	Wt & Grade	Depth Set	
2-3/8"	4.7# J-55	7501'	240jts, SN up one jt

Formation Tops:

Surface:				ISICP =	2,212 psi
Nacimiento:	705'	Niobrara:	6356'	Last SITP =	
Ojo Alamo:	2275'	Juana Lopez:	6798'	Initial 3-hr =	
Kirtland:	2490'	Greenhorn:	7110'	Initial AOF =	
Fruitland:	2735'	Graneros:	7166'	Cum Gas =	
Pictured Cliffs:	2932'	Two Wells:	7202'	Cum Oil =	
Lewis:	3050'	Pagaute:	7322'	Current Rate =	30 MCFD & 0.25 BOPD
Chacra:	3830'	Cubero:	7364'		
Cliff House:	4615'	Oak Canyon:	7452'	Oil Transp:	Meridian Oil Inc.
Menefee:	4658'	Encinal Canyon:	7464'	Gas Transp:	El Paso Natural Gas
Point Lookout:	5058'	Burro Canyon:	7524'	Line Press =	80 to 120 psi
Mancos:	5470'	Morrison:	N.R.		

Logging Record: GR-Dens, Ind-SP, GR-CCL, Temp

Stimulation: Perforated Dakota as follows with 18 (0.??") holes per set 7218'-7224', 7236'-7244', 7324'-7332', 7368'-7374', 7395'-7401, 7416'-7424', 7438'-7450', 7510'-7522' 144 holes total. Frac well with 81,000 gal water & 80,000# 40/60 sand at 40 bpm with 126 balls dropped in sets of 18. ATP 3000 psi. ISIP 1100.

Workover History: 6-09-71 TD Well. Log Well 6-11-71 Cement Well 3 stages

6-12-71 Spot acid. Pressure up to ???, Perforate as above. Frac well with 80,000# 40/60 in 80,000 gallons slickwater @ 40 BPM ATP only 3000 psi. Dropped balls, little to no ball action. ISIP = 1100 psi, 5 min 1000.

6-13-71 Blow & clean out. well logging off

6-16-71 Land tubing 241 jts @ 7521'

10-5-71 RU workover rig. Pull tubing. Hard to pull, sand stuck, tubing. Pull 45K# over. Freed.

10-6-71 TIH w/ PKR set down hard at 5520'+/-. Go below DV @ 5516'. Test backside Failed at rate of 2 BPM 1600 psi. POOH w/ PKR. Set CIBP @ 7149'. Set retainer at 5368'. Test annulus okay. Mix and pump 100 sxs cement at 2 BPM 1700 psi. Displace WOC 4 hrs. Leaking at 1.5 BPM 2100 psi. Mix & pump 100 sxs. Hesitate to 2600 psi. Held. Test tubing 3000# okay. Unsting. Tubing full of cement. Attempt tor reverse out cement. Did not work well. DO cement. PT to 3000# okay. DO CIBP and gauge well 171 MCFD. Set BP @ 7207' & test casing to 3000# okay. DO plug. TIH w/BP & PKR combo. Isolate all zones and pump into each to ensure open, all open but 7510'-7522' which broke at 5000 psi. Refrac well down casing!!! at 33 BPM with 3000# being max pressure. 46,000 gallons slickwater with 45,000# 40/60 while dropping balls. Clean well out. Land tubing as above. Final gauge 509 MCFD.

11-18-71 Tubing is plugged. Probably cement from previous work. Shot 2 holes with Kinley perforator at 7429'.

02-93 Installed Cathodic Protection

Vaughn # 13
Blanco Mesaverde/Undesignated Gallup/Basin Dakota Workover
UnitA-Sec27-T26N-R06W

Prior to Moving on Workover Rig, Inspect Location, Verify All Appropriate Equipment is on Hand. Dig work pit for water/cement recovery/flare pit, fence pits. Comply with all BLM, NMOCD, & MOI rules & regulations. **Always Hold Safety Meetings.**

- Ensure all approvals for Commingle work necessary have been approved.
- Utilize EPNG Drill Gas.
- Spot Ten (10) Tanks & Fill **(9)-400 bbl tanks** with risers to pre-gel. Pre-Gel 2 tanks.
- Use Only True 2% KCl water, (or substitute) Filter Frac & Acid water to 1 microns.
- Fifty*(50) joints 2-3/8" 4.7# EUE J-55 tubing on location.*
- Six (6) 3-1/8" Drill Collars on location.
- Will utilize trucked Nitrogen after intial work in place of drill gas.
- 900 series BOP, 7" blooie line, manifold, & 1/4", 1/2", & 3/4" chokes as appropriate.
- 2-7/8" N-80 Buttress Frac String (7000' +/- required).

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1. Move In workover rig. Record and report SI pressures on tubing, casing, & bradenhead. Lay blowdown line. Blow down casing & tubing. Pump 20 bbls 2% KCl down tubing. ND WH, NU BOP & stripping head. Test all equipment!

2. TOOH, rabbit, & strap 240 jts of 2-3/8" tubing (from 7501', SN up one jt). Flow well out blooie line. Visually inspect tubing, note any scale in tubing. Lay down bottom **500'** of this pipe.

3. PU 3-7/8" bit, float, 3-1/8" Drill Collars & 2-3/8" 4.7# J-55 EUE workstring. Rabbit & Strap pipe in the hole. RU powerswivel. Drill & Clean out with Gas & Foam sweeps to PBTD 7550'. Note Drilling Mud in returns if any. Once cleaned up. TOOH with bit & collars. Drill gas rate maximum of 600 MCFD (due to low line pressure).

4. PU 4-1/2" CIBP (Use of CIBP will facilitate use of a cement retainer should one be required.) & 4-1/2" Packer Combination on 2-3/8". TIH & set CIBP @ **7100'**, T&A Dakota. Roll hole & fill from bottom with filtered 2% KCl water, Set PKR above CIBP & Test CIBP & tubing to 3500 psi. Hold for 10 minutes. Release PKR, close pipe rams, & Pressure test entire casing string to 500 psi for 10 minutes. If PT does not hold Pull above DV tool @ 5516' and 3161' & test below each to 1200 psi. TOOH.

5. RU wireline. Run GR-CCL-CBL from 7100' to surface. No gaps. Run with 500-1000 psi over entire interval hole. Note and report all cement tops and quality of bond over both Gallup & Mesaverde Interval. **RU Schlumberger to Run CASED HOLE DIPOLE SONIC LOG across Gallup interval from 6300' to 7100' and Mesaverde interval from 4900' to 5400'.** Actual Perforations will be verified by Engineering prior to shooting!!

6. Test casing from surface to 1200 psi via BOP. Hold and record for 15 minutes on chart. If casing integrity is not sound, identify leaks, & Engineering will recommend squeeze procedure & modify stimulation work.

7. Complete all squeeze cementing operations which will be determined based upon pressure test information and bond quality. WOC recommended time plus 2 hours. Drill out Cement. Pressure test to 1200 psi. Spot 500 gallons 10% HCl acid with (2 gal/1000 inhibitor, 2 gal/1000 iron sequestering agent, 1 gal/1000 non-emulsifier) across Gallup @ 6550'. TOOH, standing 2-3/8" back. Change rams to 2-7/8"

Vaughn # 13
Meridian Oil Inc.
11/08/94

8. Perforate Gallup Interval with 3-1/8" HSC gun select fire 180 degree phasing 1 SPF JRC C-3130234 charges 10.5 gram 0.30" holes (0.30" is the Maximum Hole Size Preferred) Top-down as follows: (15 holes). Engineering may modifiy perforations based upon bond character.

6362' 6374' 6398' 6411' 6422' 6442' 6451' 6475' 6483' 6507'

6517' 6533' 6546' 6571' 6588' (15 holes, 226 feet of interval).

9. PU PKR, 1.81" profile nipple, 2 joints 2-3/8" 4.7# N-80 tubing, 2-3/8" x 2-7/8" buttress changeover, 2.25" profile nipple, and 2-7/8" 8.7# N-80 Buttress frac string. TIH below bottom perforation and test tubing, & frac string to 3500 psi on good bonded pipe. Pull uphole & set PKR 100' above top Gallup perforation. Hold 500 psi on annulus during acid job. Pump 1500 gallons 10% HCl acid with (2 gal/1000 inhibitor, 2 gal/1000 iron sequestering agent, 1 gal/1000 non-emulsifier) and drop 30 - 7/8" 1.3 Specific Gravity ball sealers. Ball off to 3500 psi. Release pressure displace acid. Release PKR & TIH knocking balls below bottom perforation. Pull up and reset PKR.

10. RU stimulation company. Install 10,000 psi working pressure full opening surface valve. Hold 500 psi on annulus. Hydraulically stimulate Gallup interval with 70,000# 20/40 resin coated proppant at 25 BPM. Maximum surface treating pressure will be 5,500 psi, not 3,500 psi due to static vs frictional pressure effects. Sand will be tagged with Ir-192 radioactive isotope.

11. Flow well back after frac on 1/4" choke until surface pressure is below 500 psi. Then flow well on open 2" line thru choke manifold. When possible ensure annulus has full column of liquid and release PKR. TOOH with 2-7/8" tubing and PKR. If necessary set plug in 1.81" profile nipple.

12. RU wireline & set CIBP @ 5400'. Change rams to 2-3/8".

13. TIH w/ PKR on 2-3/8" and test CIBP and part of casing from below DV @ 3161' to 3500 psi. Spot 500 gallons 10% HCl acid at 5350' across Mesaverde. TOOH. Change rams to 2-7/8".

14. Perforate Mesaverde Interval with 3-1/8" HSC gun select fire 180 degree phasing 1 SPF JRC C-3130234 charges 10.5 gram 0.30" holes (0.30" is the Maximum Hole Size Preferred) top down as follows: (18 holes). Engineering may modify perforations based upon bond character.

5179' 5181' 5183' 5185' 5187' 5189' 5208' 5216' 5238' 5244'

5246' 5249' 5291' 5293' 5332' 5337' 5349' 5372' (18 total holes, 193' of interval)

15. PU PKR, 2.25" profile nipple, and 2-7/8" 8.7# N-80 Buttress frac string. TIH below bottom perforation and test tubing, & frac string to 3500 psi on good bonded pipe. Pull uphole & set PKR 150' above top perforation. Hold 500 psi on annulus during acid job. Pump 1500 gallons 10% HCl acid with additives and drop 36 - 7/8" 1.3 Specific Gravity ball sealers. Ball off to 3500 psi. Release pressure displace acid. Release PKR & TIH knocking balls below bottom perforation. Pull up and reset PKR below DV tool @ 3161' on good bonded pipe.

16. RU Frac Crew. Install 10,000 psi working pressure full opening surface valve. MAXIMUM SURFACE TREATING PRESSURE WILL BE **5500 PSI** not 3500 psi because of friction effects. Hold 500 psi on annulus. Stimulate Mesaverde per attached schedule w/ 30# X-link Gel & 101,000# 16/30 Brady & tail w/ 15,000# 16/30 Resin at 35 BPM. Proppant will be tagged with Ir-192 tracer. SI well.

Vaughn # 13
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17. Flow well back through choke manifold limiting fluid production to 20 BLPH. When possible, Release PKR & TOOH laying down 2-7/8" N-80. If necessary set plug in 1.81" profile nipple. Change out rams. TIH w/ 3-7/8" bit, collars, & float, on 2-3/8" and clean well out to CIBP @ 5400' with gas. Stage in hole as required. Clean well up until returns will not interfere with drilling of CIBP. Obtain MV pitot gauge. Drill CIBP. Push to bottom @ 7100' +/-. Clean up entire well until returns are less than 6 BPH. TOOH with bit & collars. Obtain MV/GP production gauge.

18. RU wireline. Run AFTER FRAC GAMMA RAY and Temperature log in combination with well flaring out blooie line. Log temperature in hole. Note fluid level if present. Run & Set CIBP @ 6000'+/- covering/T&A Gallup zone. RD wireline.

19. Prepare to run production tubing string as follows for Mesaverde: expendable check, one joint 2-3/8" tubing, 'F' nipple, and remaining tubing. Land tubing @ 5400', ND BOP, NU WH. Pump off expendable check and flow well up tubing obtain Mesaverde production gauge. RD & Release Rig to next location.

20. Operations will remanifold wellhead, and produce well for 180 days into EPNG pipeline. Notify Governmental agencies that Mesaverde ONLY production will occur until further notice, GP & DK Temporarily abandoned. At end of test Run pressure bomb in SN and SI well. Leave well SI 7 days. Pull Bomb, and return Mesaverde to production until workover rig returns.

21. Move In, RU workover rig. Lay all lines and manifolds. RU drill Gas unit. Record flowing casing & tubing pressures. Blow casing and tubing down. Kill tubing with 20 bbls 2% KCl water. ND WH, NU BOP. TOOH with 2-3/8". RU power swivel. TIH w/ 3-7/8" bit, 4-3-1/8" drill collars & drill CIBP @ 6000'+/- clean well out with Gas. Drill CIBP @ 7100' & push plugs to PBTD. TOOH & LD bit & collars.

22. TIH with final production tubing string for commingled production as follows: expendable check, one joint 2-3/8", F nipple, and remaining 2-3/8" tubing. Land tubing @ 7500'. ND BOP, NU WH. Pump off check w/ water & Gas. Flow well up tubing verifying check pumped. RD release rig to next location.

23. Notify Marketing & government agencies that commingled production from all horizons MV, GP, & DK will occur in order to finalize allocation formula. At end of 90 days, the allocation formula will be submitted to NMOCD for approval, **production will commence prior to actual allocation approval.**

Approved: _____
Drilling Superintendent

TEM

Recommended Vendors:		
Stimulation(Acid,Fracturing,Nitrogen)	Western Company	327-6222
Radioactive Tagging	Protechnics, Intl	326-7133
Cased Hole Services (Perforating, Logging)	Petro Wireline	326-6669
Cased Hole Dipole Sonic Log	Schlumberger	325-5006
Frac String (2-7/8")	Cave Enterprises	325-3401
Bridge Plugs, Packers, WAPP tool	Schlumberger	325-5006
Engineering	T. E. Mullins	326-9546-W
		327-8692-pager