submitted in lieu of Form 3160-5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED BLM
94 FEB 15 AM 11:32
070 FARMINGTON NM

Sundry Notices and Reports on Wells

1. **Type of Well**
GAS

5. **Lease Number**
SF-079366

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

7. **Unit Agreement Name**

2. **Name of Operator**
MERIDIAN OIL

8. **Well Name & Number**
Vaughn #31E

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

9. **API Well No.**

4. **Location of Well, Footage, Sec., T, R, M**
1890'FSL, 860'FEL Sec.29, T-26-N, R-6-W, NMPM

10. **Field and Pool**
Blanco MV/Basin Dk

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

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

Type of Submission	Type of Action	
_x_ Notice of Intent	___ Abandonment	___ Change of Plans
	_x_ Recompletion	___ New Construction
___ Subsequent Report	___ Plugging Back	___ Non-Routine Fracturing
	___ Casing Repair	___ Water Shut off
___ Final Abandonment	___ Altering Casing	___ Conversion to Injectio
	___ Other -	

13. **Describe Proposed or Completed Operations**

It is planned to temporarily abandon this well in the Basin Dakota formation, recomplete in the Blanco Mesa Verde and put on production after 30 days± production. The well will be commingled in the Basin Dakota and Blanco Mesa Verde formations. Application is ongoing for an area commingle of the entire Klein/Vaughn leases. This application will be submitted by March 15, 1994. Due to previous commingle procedence in the area by Unocal and Caulkins Oil, Attached is a wellbore diagram and procedure for this work.

RECEIVED
FEB 24 1994
OIL CON. DIV.
DIST. 3

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

Signed Peggy Bradfield (TEM) Title Regulatory Affairs Date 2/14/94

APPROVED
FEB 16 1994
DISTRICT MANAGER

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

OK

NMOCD

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes
Effective 1-

All distances must be from the outer boundaries of the Section

RECEIVED
BLM
94 FEB 15 AM 11:32
070 FARMINGTON, NM

Operator	Lease	Well No.
Meridian Oil Inc.	VAUGHN (SF-079266)	31E

Unit Letter	Section	Township	Range	County
I	29	26N	6W	Rio Arriba

Actual Footage Location of Well:
1590 feet from the South line and 860 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
6389	Dakota / Mesa Verde	Basin / Blanco	320/320 Acres

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

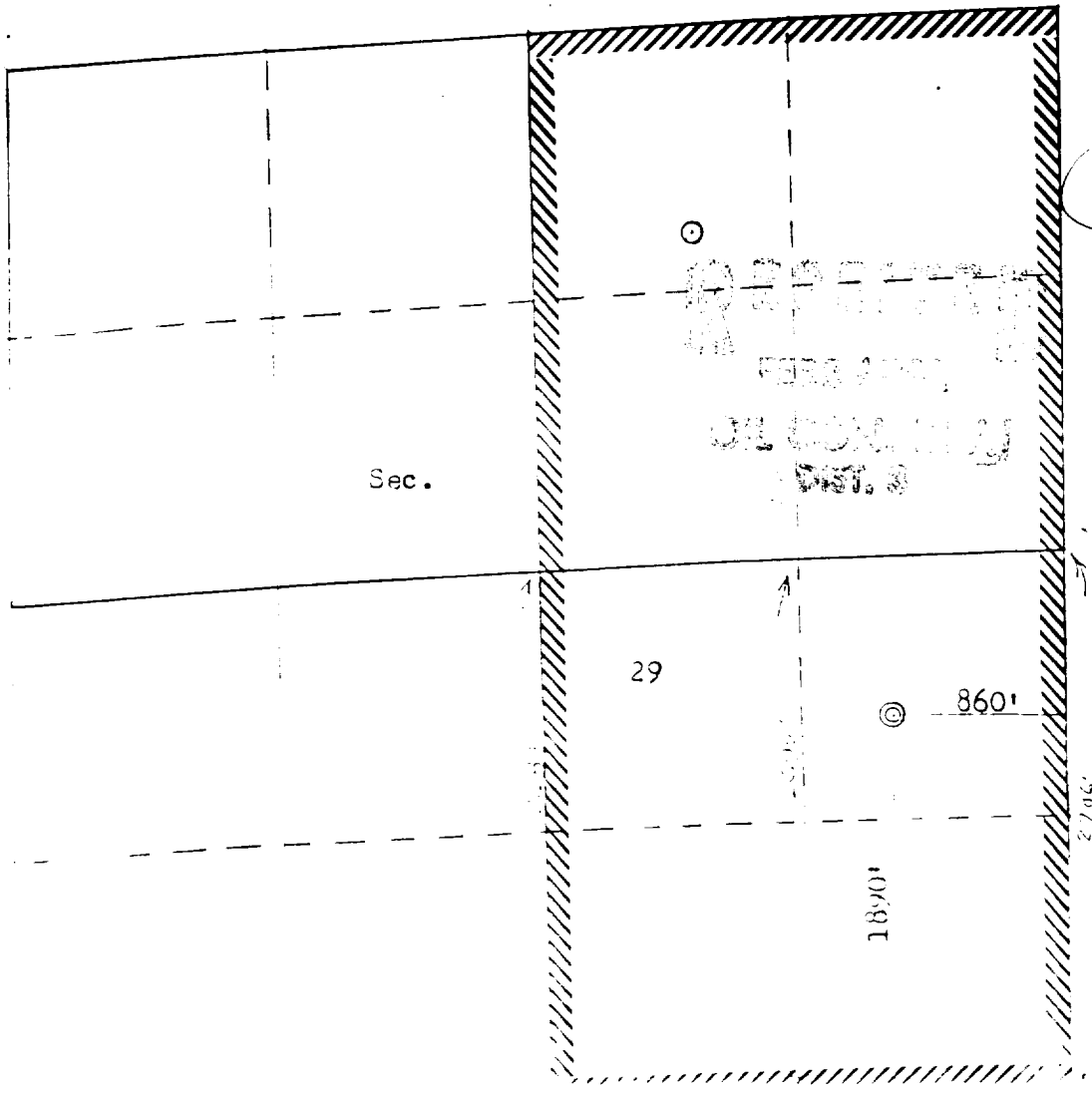
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to work interest and royalty).

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 this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitizati forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Comm sion.



CERTIFICATION

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

Name: Peggy Bradfield

Position: Regulatory representative

Company: Meridian Oil Inc.

Date: 2-14-94

I hereby certify that the well locat shown on this plat was plotted from fi notes of actual surveys made by me under my supervision, and that the sa is true and correct to the best of knowledge and belief.

Date Surveyed: October 24, 1985

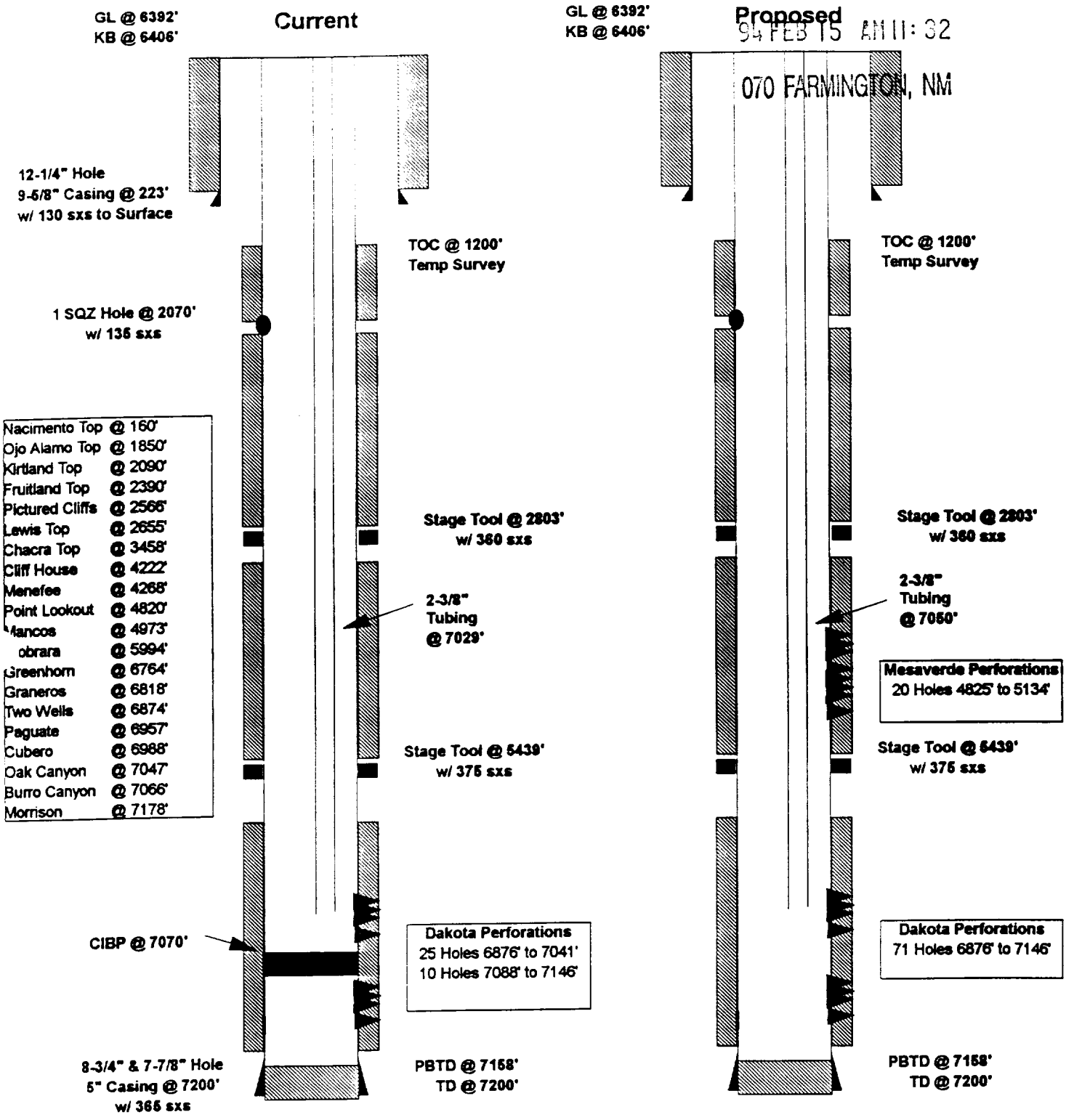
Registered Professional Engineer and/or Land Surveyor

Certificate No. [illegible] Jr.

Vaughn # 31 E

T26NR06W29I

Mesaverde & Lower
Dakota Work



This well will be commingled in the Mesaverde and Dakota. An allocation Formula wil 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 Dakota will be Temporarily Abandoned under a Retreivable bridge plug, while the Mesaverde will be produced separately to help determine commingled production.

Meridian Oil Inc.
01-24-94/ TEM

Dakota & Mesaverde Workover Procedure
Vaughn # 31E
T26NR06WSec29I
Basin Dakota Producer

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.**

- **ALL CASING IS 5" 23# CASING (5.094" OD, 4.044" ID)**
- Ensure all approvals for Commingle work necessary have been approved.
- Utilize EPNG Drill Gas.
- Spot and fill **Seven (7)-400 bbl tanks** with risers to pre-gel if necessary.
- Use Only True 1% KCl water, (No substitutes!) Filter Frac & Acid water to 25 microns.
- *Two-hundred-Sixty (260) joints 2-3/8" 4.7# EUE N-80 tubing on location.*
- Eighty-Joints (80) joints 2-7/8" 8.7# N-80 Buttress Thread, for MV Frac.
- Four (4) 3-1/2" Drill Collars on location.
- Will utilize trucked Nitrogen after intial work in place of drill gas.
- Will utilize Three (3) 4-1/2" RBP, 4-1/2" Fullbore PKR, & 4-1/2" Tension PKR.
- 900 series BOP, 7" blooie line, manifold, & 1/4", 1/2", & 3/4" chokes as appropriate.

1. Move In workover rig. Record and report SI pressures on tubing, casing, & bradenhead. Lay blowdown line. Blow down casing & tubing. Pump 30 bbls 1% KCl down tubing. ND WH, NU BOP & stripping head.

2. TOOH, rabbit, & strap 2-3/8" tubing (216 jts from 7029', SN @ 6982'). Flow well out blooie line. Visually inspect tubing. Note any scale in tubing. Stand production string back in derrick. Lay down approximately **2100'** of this pipe on float.

3. PU 3-7/8" bit, float, drill collars, & TIH on 2-3/8" N-80 workstring. Clean out well to drillable BP @ 7070'. Note: Pressure beneath Plug. Drill CIBP and clean well out to bottom w/gas @ 7158', drill additional hole through Float Collar @ 7158', if unable to go deeper. TOOH.

4. RU wireline. Run gage ring to PBTD @ 7158'. Run GR-CCL from PBTD to 6800'. (This will be utilized for correlation.) Run 5" CIBP on wireline. Set Plug @ 6800' +/- above current Dakota perfs.

5. PU 5" tension set PKR on 2-3/8" N-80 workstring. Load hole from bottom with 1% KCl water approximately 100 bbls. Set PKR above CIBP. Test tubing & CIBP to 6500 psi. Test annulus to 500 psi maximum at this time. Release pressure & TOOH.

6. RU wireline. Run GR-CCL-CBL from 6800' to surface. No gaps. Run with 500-1000 psi over entire interval. Note and report all cement tops and quality of bond over Mesaverde Interval. Run GR-dual spaced neutron log across 5800' to 6800', 4100' to 5000', & 2000' to 2700'. Actual Perforations will be verified by Engineering prior to shooting!!

7. PU Fullbore PKR & TIH to 2250'. Fill hole if during logging (19 bbls rough pipe displacement) fluid is not to surface. Set PKR and test Casing from 2250' to 6800' to 6000 psi. Hold and record for 15 minutes on chart. Pull above If casing integrity is not sound, identify leaks, & Engineering will recommend squeeze procedure & modify stimulation work.

8. PU 3-7/8" bit, drill collars and stage in hole unloading. Drill CIBP @ 6800' with gas & clean out to PBTD of 7158'. Pull up and gauge well through manifold 1 hr. Check for fill. Spot 50 bbls 1% KCl water on bottom and TOOH.

9. RU wireline. Run RBP (Pressure Bomb below in sub, ensure pressure will communicate past plug from internal element removal). Set plug @ 7150' (Below all perforations!!, Note). Prepare to perforate under full lubricator. Run one 3-1/8" HSC gun. Perforate following intervals with 2 SPF (90 degree phasing Owen-306 12 gr 0.38" holes, 18' gun, 36 holes), Bottom-Up.

7140', 7124', 7116', 7107', 7103', 7095', 7092', 7089', 7034',
7031', 7007', 6991', 6969', 6965', 6962', 6925', 6884', 6878'

10. RU Frac Crew at this time. (All frac water must be filtered and at approximately 80 degrees Fahrenheit). PU tension set PKR, profile nipple, & TIH on 2-3/8" N-80 tubing string. Set PKR below Perfs and test frac string to 6500 psi. Load/Kill Backside with 1% KCl water. Utilize full opening valve tested to minimum of 6500 psi. Hold and record pressure for 30 minutes. Pull up and reset PKR @ 7065'. PREPARE to HYDRAULICALLY FRACTURE DOWN 2-3/8" TUBING! **MAX PRESSURE 6500 PSI.** Frac w/ 50,000# 20/40 econoprop in 35# delayed borate crosslink gel on the fly. (See attached schedule).

11. SI well for minimum of 6 hrs for fracture to close. Flow well back on 1/4" choke. Minimize liquid returns to 20 BPH. When possible, Release PKR & TOOH with tubing.

12. PU notched collar, Two (2) string floats, & TIH and clean well out to PBTD with gas. When zone has cleaned up (24 hrs), TOOH. Call on Nitrogen Truck if necessary to Clean out to PBTD.

13. RU wireline and Full Lubricator. Run AFTER FRAC GAMMA RAY # 1. Run standard RBP. Set RBP @ 7065'. Kill well from surface with 30 bbls 1% KCL once RBP has been set. w/ dump bailer place 5 gals on top of RBP.

14. RU acid & nitrogen crew. PU tension set PKR, profile nipple, & TIH on 2-3/8" N-80 tubing. Pump 30 bbls 1% KCl down tubing. Set PKR below perfs and test tubing & BP to 4000 psi with 1% KCl water. Test all surface lines to 5000 psi. Pull up and reset PKR @ 6800', load annulus and hold 500 psi on annulus throughout acid job. Acidize Traditional Dakota Interval. MAX PRESSURE 4000 PSI. Pump Acid & Nitrogen per attached recommendation. Total open holes are 25 old + 20 New = 45 holes.

15. SI well. RU to flow well back through choke manifold. Flow well back through manifold limiting fluid to 10 BPH for first 2 hours, then on 1/2" choke. When possible release PKR & TOOH.

16. PU notched collar, float, & TIH cleaning well and unloading spent acid with gas. Gauge well through manifold on choke for minimum 1 hour and TOOH, Laying down unneeded 2-3/8" N-80.

17. RU wireline. Run standard 4-1/2" RBP & set RBP @ 5350'. w/ dump bailer place 2 sxs sand on top of RBP prior to testing.

18. Perforate Mesaverde Interval with 3-1/8" HSC gun select fire 0 degree phasing 1 SPF Owen-302 10 gr charge **0.28"** holes as follows: (20 holes):

5134', 5027', 5015', 4996', 4967', 4961', 4953', 4945', 4913', 4908',
4893', 4882', 4860', 4857', 4855', 4852', 4850', 4848', 4837', 4825'

19. PU 4-1/2" SAP/SPIT tool (2' spacing & No isolation flapper!) on 2-3/8" N-80 tubing. Strap pipe in hole verififying previous tally. TIH below perfs on clean pipe and test RBP and SAP tool to 3500 psi. MAX PRESSURE 4000 PSI. Will utilize **2500 gallons acid**. Pull up and treat each perforation with 100 gallons 10 % HCl acid w/ 1 gal/1000 clay stabilizer, 2 gal/1000 inhibitor, & 2 gal/1000 iron control. Ensure each perforation is open. Use excess acid on last 2 settings (Previous workovers have not broken down these perforations). TOOH when complete.

20. RU Frac Crew. Change out rams. PU fullbore PKR & 2250' of 2-7/8" N-80 buttress tubing. Install 5000 psi working pressure full opening surface valve. Set PKR @ 2250' (Below squeeze hole) MAXIMUM SURFACE TREATING PRESSURE WILL BE **6500 PSI**. Stimulate Mesaverde per attached schedule w/ 200,000# 20/40 brady in 30# X-Link Gel @ 35 BPM down 2-7/8" tubing & 5" casing. Recalculate friction numbers based upon actual pipe length's and ID's encountered.

21. SI well for 4 hrs. Flow well back through choke manifold limiting fluid production to 20 BLPH, when possible, release PKR & TOOH, LD 2-7/8" N-80. Change out Rams. TIH w/ notched collar, float, & 2-3/8" and clean well out to RBP with gas. Clean well up approximately 48 hrs and TOOH laying down remaining 2-3/8" N-80 workstring.

22. RU wireline. Run AFTER FRAC GAMMA RAY # 2.

23. 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 @ 5200'. ND BOP, NU WH. Pump off expendable check and flow well up tubing obtain Mesaverde production gauge. RD & Release Rig to next location.

24. Operations will remanifold wellhead, and produce well for 30 days into EPNG pipeline. At end of 30 days, Run pressure bomb in SN and SI well. Leave well SI 7 days. Pull Bomb, and return Mesaverde to production until workover rig returns.

25. Move In, RU workover rig. Lay all lines and manifolds. Record flowing casing & tubing pressures. Blow casing and tubing down. Kill tubing with 20 bbls 1% KCl water. ND WH, NU BOP. TOOH with 2-3/8". TIH w/ retreiving head, float, & clean well out with Nitrogen. Spot 15 bbls fluid on top of RBP. Engage & release RBP. TOOH & LD RBP.

26. TIH w/ same and retreive RBP above Lower Dakota. Spot 25 bbls 1% KCl on top of RBP. Engage & release RBP. TOOH & LD RBP.

27. TIH w/ same and retreive RBP w/ pressure bomb on beneath. Engage & release RBP. TOOH with RBP and bombs.

28. 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, PU from float. Land tubing @ 7050'. ND BOP, NU WH. Pump off check w/ water & Nitrogen. Flow well up tubing verifying check pumped. RD release rig to next location.

29. Notify Marketing & government agencies that commingled production 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

TDS

Recommended Vendors:

Stimulation(Acid,Fracturing,Nitrogen)	BJ Services	327-6288
Radioactive Tagging	Protechnics, Intl	326-7133
Cased Hole Services (Perforating, Logging)	Blue Jet Perforating	325-5584
Bridge Plugs, Packers	Baker Services	325-0216
Pressure Bombs	Tefteller	325-1731
2-3/8" N-80 (NEW PIPE!!) workstring	District Tools	326-9853
Engineering	T. E. Mullins	326-9546-W
		325-9361-H