	UNITED	STATES	FORMAPPROVED
Form 3160-	DEPARTMENT OF	Budget Bureau No. 1004-0135	
(June 1990)	BUREAU OF LANG	Expires March 31, 1993	
1		5. Louise Designation and Serial No.	
	SUNDRY NOTICES AND		
		to deepen or reentry to a different reservoir 5	
	Use "APPLICATION FOR PE	ERMIT -" for such proposals	6. If Indian, Allottee or Tribe Name
	SUBMIT IN T	BIBLICATE 070 Familiacio	th. NM
	1. Type of Well	TUPLICATE	7. If Unit or CA, Agreement Designation
			•
	Oil Well Gas Well	Other	
			8. Well Name and No.
	2. Name of Operator		
	Synergy Operating, LLC	OGRID # 163458	29-4 Conoco # 2
	O Address and Telephone No.	AND ICH IN CO.	9. API Well No.
	3. Address and Telephone No. PO Box 5513	505) 325-5449	30-039-20649
	·	SEP 7	11D)
	Farmington, NM 87499  4. Location of Well (Footage, Sec, T. R., M, or Surve	av Description)	10. Field and Pool, or Exploratory
	4. Location of Well (Footage, 380, 1. R., W, of Surve	ey Description)	Campo (Gallup) GP
	1770' FNL & 944' FEL Sec 11	T29N R04W	11. County or Parish, State
	Unit Letter H	, 12514, 10444 (	Rio Arriba County
	Offic Editor 11		New Mexico
<del></del>	12. CHECK APPROPRIATE BOX(S) TO	INDICATE NATURE OF NOTICE, REPORT, OR	
	TYPE OF SUBMISSION	TYPE-OF ACTION	
		TYPE-OF ACTION	_
	TYPE OF SUBMISSION  Notice of Intent	Abandonment 2	Change of Plans
	Notice of Intent	Abandonment Recompletion	Change of Plans New Construction
<u></u>		Abandonment Recompletion Plugging Back	Change of Plans New Construction Non-Routine Fracturing
<del></del>	Notice of Intent  Subsequent Report	Abandonment Recompletion Plugging Back Casing Repair	Change of Plans New Construction Non-Routine Fracturing Water Shut-Off
	Notice of Intent	Abandonment Recompletion Plugging Back	Change of Plans New Construction Non-Routine Fracturing Water Shut-Off Converion to Injection
	Notice of Intent  Subsequent Report	Abandonment Recompletion Plugging Back Casing Repair Altering Casing	Change of Plans New Construction Non-Routine Fracturing Water Shut-Off
	Notice of Intent  Subsequent Report	Abandonment Recompletion Plugging Back Casing Repair Altering Casing	Change of Plans New Construction Non-Routine Fracturing Water Shut-Off Converion to Injection Dispose Water
	Notice of Intent  Subsequent Report  Final Abandonment Notice	Abandonment Recompletion Plugging Back Casing Repair Altering Casing	Change of Plans New Construction Non-Routine Fracturing Water Shut-Off Converion to Injection Dispose Water (Note: Report results of multiple completion on Well Completion or recompletion Report and Log Form)
	Notice of Intent  Subsequent Report  Final Abandonment Notice  3. Describe Proposed or Completed Operations (Clean	Abandonment Recompletion Plugging Back Casing Repair Altering Casing Other	Change of Plans New Construction Non-Routine Fracturing Water Shut-Off Converion to Injection Dispose Water (Note: Report results of multiple completion on Well Completion or recompletion Report and Log Form) , estimated date of starting work.
	Notice of Intent  Subsequent Report  Final Abandonment Notice  3. Describe Proposed or Completed Operations (Clear If well is directionally drilled give subsurface locations)	Abandonment Recompletion Plugging Back Casing Repair Altering Casing Other  Other  by state all pertinent details, and give pertinent dates, including and measured and true vertical depths for all markers and zo	Change of Plans New Construction Non-Routine Fracturing Water Shut-Off Converion to Injection Dispose Water (Note: Report results of multiple completion on Well Completion or recompletion Report and Log Form) , estimated date of starting work. nes of pertinent to this work.
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Title 18 U.S.C. Section 1001, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, ficticious, or fraudulent statements or representations as to any matter within its jurisdiction

14. I hereby certify that the foregoing is true and corre

Approved by: Original Signed: Stephen Mason Conditions of approval if any

Thomas E. Mullins
This space for federal or state office use

Signed:

Title: Engineering Manager

Date:

Date:

09-11-2003

SEP 1 6 2003

## Synergy Operating, LLC

29-4 Conoco (11) # 2 Unit H, 1770' FNL & 944' FEL, Section 11, T29N – R04W Rio Arriba Co., New Mexico

Latitude: 36°, 44′, 30″ North (36.7416500°) Longitude: 107°, 13′, 02″ West (-107.2173100°)

**PROCEDURE TO:** Abandon the existing Gallup producing interval, and the T&Ad Mesaverde interval. Recomplete in the Pictured Cliffs and Fruitland Coal formations and commingle production.

Directions to Wellsite: Take Hwy 64 East out of Bloomfield and pass through the Carson National Forest. At the East end of the forest, Just across the Jicarilla boundary. Turn Right (South) on Road J-10 (aka FR357). Travel 1.2 miles. Turn Right (West) on FR-301. Travel approximately 1.0 miles, until reaching the fork (going uphill, or downhill). Turn Right (West) "Downhill" on FR-301B, and travel straight ahead approximately 1.0 mile to the end of the road.

Well History (Prior to Synergy's Ownership): a Baker Model 'D' permanent packer @ 7340', which isolates abandoned Point Lookout perforations 6010-6145'. A retrievable packer is set at 6207' The original operator tested the Point Lookout, which proved to be wet. The operator then attempted severatried, as well and was unable to fully isolateabandon with several cement squeezes. There are no artificial lift devices on this well.

**NOTE:** All depths are referenced to a KB elevation of 7063' (13' above graded ground elevation of 7050').

- 1. If any excavation is necessary to facilitate the workover activities, notify Glen Papp or Larry Starkey w/ L&R Anchor Service for a One Call a minimum of 48 hours prior to commencing any work.
- Locate nearest area that an emergency rescue helicopter can land and document approximate distance and direction from well pad on Emergency Response page located at the back of this procedure.
- 3. (Lifted Fire Restrictions July 30, 2003: however, check for current Carson National Forest Fire restrictions)
- 4. Repair road to location prior to MIRU, requires culverts & prior Forest Service approval for archeological clearance. Bill Moss Excavation.
- 5. Set & Test rig anchors. Dig, line & fence workover pit. (Have roustabout crew carry one of Synergy's 45-Bbl Fiberglass pit, from L&R's yard to location and set out of the way. We'll set the tank outside WFS's earthen pit, build fence, build berm and net while equipment is on location to back-fill workover pit).
- 6. Hold Pre-Job Safety Meeting.

- 7. MI RU Completion Rig and associated equipment (Rig pit, pump, swivel, & BOPE). Purchase three (3) 5 gallon pails of KCl substitute to use in rig pit for kill and workover fluid from H&M Precision Products.
- 8. Set empty pipe float to lay down approximately 4500' of 2-3/8" 4.7#/Ft (21,150-lbs) tubing during operation.
- 9. IMPORTANT. Record Bradenhead, Casing, and Tubing pressures. Lay two (2) 2" flow-back lines to lined pit, blow down well as necessary.
- 10. Kill well, if necessary, using water w/ KCl substitute mixed at 2%.
- 11. ND upper wellhead. NU BOPE. Pressure Test and Function Test BOPE.
- 12. Unset tubing hanger (Send Tubing Hanger & Master Valve to WSI for repair)
- 13. Unset Guiberson Uni-Packer III w/ hydraulic hold-down @ 6207' (Similar to Baker Model AR-1, which is a snap set type packer). Should just need to pick weight up off the packer. This should also release the seal sleeve assembly in the Baker Model 'D' permanent packer, with flapper valve, set @ 7340'. If unable to pull free, contact Glen Papp or Tom Mullins.
- 14. COOH w/ 248-Jts 2-3/8" 4.7# J-55 EUE tubing, as follows: 1-Jt (31.05'), 1-Tbg sub (2.06'), 216-Jts (6161.41'), Guiberson Uni-Packer III, 36-Jts (1114.17'), Baker 'F' Nipple, 3-Perforated subs (9.32'), 2-3/8" NU Tbg sub (5.00'). Stand-back all tubing, unless in poor condition at this time. Total tubing 7,340'. Tally out, and visually inspect tubing.
- 15. PU 4-3/4" bit, and 5-1/2" 15.5# casing scraper. GIH w/ scraper to 7340'+/-. COOH w/ scraper, laying down six (6) its.
- 16. RIH w/ 5-1/2" 15.5# cement retainer on 2-3/8" tubing. Clear retainer w/water. Set retainer @ 7130'. (Top of Gallup @ 7180', Gallup perfs from 7196' to 7412'). (Flapper valve will open and take cement past Model 'D' packer). Test tubing to 2500 psi, pull up and circulate down tubing and load entire casing from bottom with water. Sting into retainer. Test tubing to 2500 psi. Test 5-1/2" 15.5# Casing annulus to 500# 5 min, then to 2500# 15 min.
- 17. RU BJ services to perform Gallup Abandonment and Mesaverde cement abandonment operations. Establish rate with water below retainer. Mix and pump 25 sxs neat cement below retainer, abandoning Gallup formation. Sting out of retainer placing 5 sxs cement on top of retainer to 7100'. This cement plug to officially abandon the Gallup formation.
- 18. COOH, laying down 2-3/8" 4.7# tubing from 7130' to 6200' (930' ~ 29 jts). Set tubing at 6200'+/- for next cement plug.
- 19. BJ services mix and spot balanced neat cement plug inside 5-1/2" casing to abandon Mesaverde, and cover old perforation intervals. Cover cement from

- 6200' to 5700' (500' 12 bbls cement). Pull through cement.
- 20. COOH, laying down an additional 1700' (~ 56 jts) of 2-3/8" tubing, leaving 4000' of 2-3/8" to be stood back in the derrick. LD stinger.
- 21. Close Blind rams. Pressure test casing to 2500#, and squeeze cement into any open Mesaverde perforations. Hold pressure minimum 1 hour. Release pressure.
- 22. RU Blue Jet. RIH w/ 3-1/8" HSC squeeze gun. Perforate 3-squeeze holes, phase 120 degrees @ 3810' (TOC @ 3818', Csg collars @ 3820 & 3788'). Correlate with old GO-International GR-CBL run 10/11/73. POOH. Have 2<sup>nd</sup> squeeze gun ready if necessary to do suicide squeeze.
- 23. Attempt to breakdown perforations down casing and monitor returns on bradenhead. Pump minimum of 20 bbls. SD. Monitor pressure.
- 24. Shoot 2<sup>nd</sup> Set of squeeze holes if necessary, and/or Release Blue Jet.
- 25. PU & GIH w/ 5-1/2" 15.5# Cement Retainer, w/ CCL on 2-3/8" Tubing. Clear retainer with water before setting (remember old cement). Set retainer @ 3790'+/-. Test Tubing string to 2500#, bleed pressure. Sting into retainer & establish circulation rate through squeeze holes @ 3810', while monitoring bradenhead for signs of circulation.
- 26. BJ Services Squeeze below retainer with 100 sxs cement slurry, to place cement coverage over Pictured Cliffs and Fruitland Coal Intervals. Sting out of retainer, reverse 2-3/8" tubing clean.
- 27. COOH w/ Tbg, and LD stinger and CCL.
- 28. Pressure test entire 5-1/2" 15.5# casing string to 2500#. Verifying integrity before stimulation work.
- 29. WOC overnight (minimum). Change out any wellhead valves that do NOT meet Synergy specifications. Check cement compressive wait time, before proceeding.
- 30. RU Blue Jet Wireline. RIH w/ GR-CCL-CBL. Log well from PBTD at 3790'+/- to surface. Log well with 250 psi on casing, pressure placed by rig pump.
- 31. If CBL shows good cement above 3550', proceed to next step. If not consult with Tom Mullins and Glen Papp for additional remedial cementing procedures.

- 32. Perforate Pictured Cliffs and Fruitland Coal, bottom up as shown below, using 3-1/8" HSC guns, correlate to Schlumberger Openhole GR-Neu-Density log run 09-03-73. Perforate in 2 gun runs. Both guns shot bottom-up as follows:
- Gun # 1 3755', 3749', 3746', 3734', 3732', 3730', 3716', 3711', 3704', 3699', 3697', 3695', 3692', 3660', 3652', 3641' Total sixteen (16) holes, 0.28" diameter, 1 JSPF, zero degree phase.
- Gun # 2 3683', 3682', 3681', 3671', 3670', 3629', 3627', 3626', 3624', 3615', 3614', 3613', 3606', 3605' ~ Total of twenty-eight (28) holes, 0.36" diameter, 2 JSPF, 120 deg phase.

Total of forty-four (44) perforations in both the PC and FTC from 3605' to 3755' (150' interval). Hole size adjusted by stand-off. All charges Owen 302. RD Blue Jet.

- 33. GIH w/ Baker SAPP tool (4' spacing), Mechanical CCL, on 2-3/8" tubing. Set below all perforations. Ask Tom Mullins if MICV, or any valve is required. We many not wish to run valve.
- 34. MIRU BJ Services Acid crew with Acid Frac.
- 35. Acidize Pictured Cliffs/Fruitland Coal w/ 1000 gallons 15% HCl acid, double inhibited, and sequestered, and 2% KCl water, as directed by Tom Mullins or onsite supervisor. Multiple settings.
- 36. COOH w/ SAPP tool.
- 37. NU WSI tree-saver, frac valves, manifold, & immediate flow-back equipment for stimulation. REQUIRE A BALL CATCHER IN THE FLOWBACK LINE.
- 38. Gel 2-400 bbl frac tanks. RU BJ Services Frac Crew to stimulate Picture Cliffs/Fruitland Coal with 50,000 lbs 20/40 Brady, and 80,000 lbs 20/40 Super LC, in 60 quality X-linked foam, design rate 30 BPM. Please see specific design, to include a planned ball drop. Job will be traced with Protechnics Radioactive tracer. Three (3) Isotopes.
- 39. Place well on immediate flow-back after fracture stimulation through ½" choke, flow-back well minimum of 36-Hrs, record manifold pressures hourly, denoting fluids, sand and gas returns qualitatively. Ensure that both flowback lines have ½" positive chokes present.
- 40. ND, immediate flow-back equipment, tree-saver & frac valves.
- 41. PU 4-3/4" bit, bit-sub, string float, and GIH on 2-3/8" tubing. CO sand fill.
- 42. PU Powerswivel, and drill out cement retainer and cement with air/mist, to ensure rat hole to 4000'. COOH, LD bit and bit sub.
- 43. Prepare to run production tubing.

- 44. TIH w/ 2-3/8" half-mule shoe expendable check, 1-8' 2-3/8" tubing sub, 2-3/8" extended SN, and remaining 2-3/8" tubing.
- 45. CO to PBTD 4000'+/- w/ air. COOH, LD any unneeded jts.
- 46. Land 2-3/8" tubing hanger w/ EOT @ 3730'+/-.
- 47. ND BOPE. Install seal sub. NU WH.
- 48. With well flowing to pit, Pump 2-Bbls wtr, drop ball to check, pump off check w/ air (record pump off pressure). Flow well to pit.
- 49. Flow well to workover pit to purge air from both tubing and casing, while rigging down.
- 50. Rig down and release rig and auxillary equipment.
- 51. Set Frac tank temporarily to handle produced water from pit. **Install separator**, and/or low profile steel pit w/ muffler for visual effects from Hwy 64.
- 52. Dispose of produced workover fluids & close lined workover pit in a timely manner.

# CONTACT LIST

## **SYNERGY OPERATING**

NAME	TITLE	WORK	HOME	CELL/ PAGER
Glen Papp	Operation Manager	566-3729	324-8144	330-1582 (c) 327-8798 (p)
Tom Mullins	Engineering Manager	566-3725	325-6561	320-1751 (c) 327-8692 (p)
Patrick Hegarty	Finance/Land/Legal Mng	599-3723	334-4491	330-6431 (c)

## CONTRACTORS

SERVICE COMPANY	CONTACT	PHONE
L&R Oilfield (Anchor Testing, Pit, Construction)	Larry Starkey	325-1922
Bobby Higgins Well Service	Jack O'Neal	320-9881 598-6600(H)
Key (Water Hauling)	H.C. Putnam	325-0416
Key (Daylight Rig Division)	John Reed	327-4935
Dawn Trucking (Heavy Haul)	David	327-6314
WSI (Wellhead)	Juan Wilson	326-0308/320-4557 (c)
Baker	Doug Bowers	327-3266
Ca-Jo Hot Shot Service	Stan Kirkland	320-8289
Cave Enterprises	Jimmy Cave	325-3401
Bill Moss Inc. (Roads)	Bill Moss	334-9093 320-0547
Air Care 1	Dispatch	1 800 452-9990

Conoco 29-4 11 # 2 Unit H, Section 11-T29N-R04W 1770' FNL, 944' FEL 7050' GL 13' KB

12-1/4" Hole

Mud Drilled

0.50

0.50

1 25

0.25

100

1 00

1.00

0.25

1.00

0.50

0.75

1.00

1.00

7-7/8" Hole

Mud Drilled

3390

3560

3972

5850

5892

6323

7180

8322

8100 Greenhorn

CIBP @ 7440

3686

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Formation Tops

Ojo Atamo 2950'

Pt. Lookout 6088

San Jose

Kirtland

Lewis

Fruitland

Pict Cliffs

Cliffhouse

Meneffe

Mancos

Gallup

Dakota

Nacimiento

Dev Surveys

240

R47

2145 0.75

2555 1.25

2955

3365

3755

4155

4660

5116

5241

5615

6100

6616

7085

7156 0.25

7685 1.00

7882 0.25

8475

Araphoe Drilling

Spud: 08/08/73 Completed

### API # 030-039-2064900

8-5/8" 24# K-55 Casing @ 237" w/ 150 eye Class & Circulated to surface

5-1/2" TOC Stage 3 @ 3845' from CBL No Coverage on the Cement

DV Tool @ 3850' w/ 330 SXS 50/50 Poz as Stg # 1 Good Returns ?

> 2-3/8" 4.7# J-55 Tubing @ 7655', F nipple (248 jts) 9' Perforated Sub at 7322' 4 - 0.25" Perforations in Tbg at 7326

#### Mesaverde Stage # 1

6010'-6018' (8'), 6084'-6087' (3'), 6089'-6092' (3'), 6097'-6104' (7'), & 6138'-6145' (7') Frac w/ 21,840 gals Diesel & 30,500 lbs sand Tested Water & Gas. Note NO CEMENT BOND Squeezed with 200 eye cement Squeeze was broken down and is leaking. Hence the reason for the PKR

GUIBERSON UNI-PACKER 3 AT 6207'

DV Tool @ 6348' w/ 208 SXS 50/50 Poz as Stg #1 No Returns, TOC Stg # 2 at 6080' from CBL

Gallup Stage # 3 7196'-7205' (9'), NO FRAC or Breakdown

Gallup Stage # 2 7260'-7304' (44'), Frac w/ 25# Gelled Condensate w/ 39,564 gals & 36,600 lbs 20/40 sand at 18.5 BPM, 4500 ATP, ISIP 1850

BAKER MODEL D PERMANENT PKR w/ flapper valve at 7340'

Gallup Stage # 1 7380'-7384' (4'), 7394'-7396' (2'), 7400'-7412' (12') @ 2 SPF Frac w/ 24,090 gals Diesel & 16,300 lbs 20/40 11.6 BPM 4800 ATP, ISIP 3150

Dakota Stg #1 8290'-8296' (6') 8335'-8348' (13'), BD w/ Acid, Frac w/ 25,100 gals Diesel & 13.500 lbs 20/40 sand. Tested Gas & Water 5-1/2" 17# & 15.5# K-55 Casing @ 8470', Cement w/ 720 sxs 50/50 Poz, 2% Gel, 6-1/4# Gilsonite

1/2% Fluid Loss Additive, Good Returns During Stg # 1

TOC on 1st Stage from CBL is at 7390°

Specialty Logs, Misc Mud Log 3000' to TD, Gas Shows in the hole EARLY!

Water Samples 10-15-73 DK Water 7 pH, 12650 Clorides, Sulfate, Iron, Etc.

Open Hole Logs (Dresser-Atlas) SP-IES (Surf to 8471' - 1 Run)

7-7/8" Hole

Mud Drilled

GR-CNL-Den (3050'-4010', 5700'-6300', 6800'-8444' - 1 Run)

**50000** 

8371' PBTD

8475' TO

TEM 06-11-2001

## Cased Hole Logs

GR-CCL (5900'-6200', 7200'-7500', 8200'-8417') (09/28/73) - GO International GR-CBL-CCL (3500'-3900', 5800'-6400', 7100'-7425') (10/11/73) - GO International

### Formation Name: Dakota

09-25-73 MIRU Big A. PU DCs & 4-3/4" bit. Tag Stg Collar at 3835', DO & Circulate Hole Clean. GIH Tag at 6312'. Test Csg to 1000#, Okay. DO second Stg Tool, PT Csg to 1000#, Okay. Tag PBTD at 8413', Circulate Hole w/ 1% KCI PT Casing to 3000# for 5 min, Okay. Spot 100 gals 15% HCI. COOH. RU GO, Run GR-CCL. Perforate Dakota as follows: 8290'-8296' (6') & 8335'-8348' (13') total 40 holes. Run 2-3/8" tbg, Land at 8259'. RDMO. RU Halliburton Displace hole with Condensate, BD perforations at 2200#. Gel Condensate & Frac Dakota with 8.3 BPM 4300 ATP, 25,100 gals Diesel, & 13,500 Ibs 20/40, Screened out, ISIP 4500. SI 24 hrs. Tbg 2100#, Csg 2500#. Open well to tank, & Swab, No success NU BOPE, Circulate out Sand bridges at 8383', Land tubing at 8321'. Swab well, mostly water, some gas cut. Flow and swab mostly condensate? No Good Flow. SI for 72 hr buid-up.

10-08-73 Csg 1350, Tbg 75, FL at 1700°. Swab well recover 10 bbls condensate & 52 bbls water. Well would flow after swabbing.

#### Formation Name: Gallup

10-10-73 Pull Tubing. RU GO. Run Baker Model N CIBP and set at 7440', POOH, GIH w/ tubing, tag CIBP. Ciructate hole. PT Csg to 4000# for 5 mins, good. Spot 200 gals 15% HCl. COOH. Run GR log, problems, run log next AM. Run GR-CCL log across zones. VDL of bond log would not work. Perforate Gallup Stg # 1 as follows: 7380'-7384' (4'), 7394'-7396' (2'). & 7400'-7412' (12) w/2 JSPF 36 holes total. Run tubing, land at 7350, well starting to flow. Next AM, Csg 975, Tbg 400. Displace hole with Condensate. RU Halliburton to Frac Gallup Stg # 1, 11.6 BPM 4800 ATP, 24,090 gals diesel, 16,300 lbs 20/40 sand in stages. ISIP 3150. SI well 24 hrs.

10-14-73 Csr 1975, Tbg 1900 after 43.5 hrs, Flow well to tank, after 32 hrs, calculated rate 650 mcfd, total condensate load recovered SION. Csg 2050, Tbg 1925. Perform multi-point test and 7 day build-up test, 5 bbls condensate recovered during test 10-24-73 Gallup BHP Measured at 7383' of 3501 psi.

10-28-73 MIRU Big A. Csg 2700#, Tbg 2675#. Flare Gas after going through test separator overnight. Lay blowdown lines. Open Csg to pit, Run CW choke inside tubing, lost choke down hole. Run a second choke, set at 7300'. Tubing holding okay. Strip out of the hole with tubing. Bottom 9 its badly pitted from acid. Run 4-1/2" magnet on sandline. No recovery of choke. Set down on CIBP. PU Baker Model D permanent PKR with flapper valve. Set PKR at 7340'. Casing flow stopped. Loaded hole with 2% KCI water. Test Csg and Model D PKR to 4500#. Purmp 2 sxs sand on top of Model D Plug. Spot 200 gals 15% HCI

### 01-26-74 Begin flow test on 22/64" choke

02-08-74 MIRU Big A, Lay Blow Line. Flow to pit overnight. RU Slickline. Run CW Choke. Set at 1000'. Pull out of Model D PKR Pull choke. PU PKR & RBP on tubing. Set RBP at 7318'. Load hole w/ 1% KCI, Set PKR at 7308'. Test RBP & Tubing to 3000# Leave 1000# on Tbg, Test Csg, started taking fluid at 2500#, MV sqz perfs not holding. Released PKR, COOH RU GO. Perforate Gallup Stg # 2 7260'-7304' (44') 2 JSPF 88 holes. GIH w/ 2-7/8" Tubing, X-O & 36 Jts 2-3/8" Tubing with PKR. Spot Acid across Perfs. Set PKR @ 6187' just 2-7/8". Hold 1000# on Annulus. Frac w/ 25# Gel Water 18.5 BPM 4500 ATP 1850 ISDP, 39,564 gals fluid & 36,600 lbs 20/40 sand, tail w/ 4,100 lbs 10/20 sand. Annulus at zero throughout job. SI for Gel Break. 02-12-74 Tbg 1350, Flow well to pit for 3 days, then on to test separator, 250 mcfd+/-, Kill Tubing. Release PKR. LD Same. 02-15-74 Perforate Gallup Stage #3 7196'-7205' (9') 2 JSPF, GIH w/ tubing. Reverse out sand fill at 7293' to RBP. Latch RBP. COOH w/ RBP. Run Production String, with Seal Assembly and Uni-Packer 3 at 6207'. Land Well. Remove BPV. Swab well in. Clean the well up. Tog as follows: (5' sub, seal assembly, 9' perforated sub, F-nipple, 36 jts 2-3/8", UNI-PACKER III w/ hydraulic holddown, 217 its 2-3/8". Sand fill at 7570'. EOT landed at 7523' ?

03-10-74 Build Up Pressure Test 3 day, More Damage? BHP 2103 psi at 7384'

07-22-74 Csg 2735, Tbg 2455, PKR not holding

08-08-77 Flow Test 4 Point, w/ build-up. SICP 2122 psi

04-28-78 First Delivery into the Pipeline.

06-12-78 Perforate 4 - 0.25" holes @ 7326' inside 2-3/8" (Middle of Perf Nipple) Csg 1882. Tbg 1402

06-24-83 BH Test Csq 898, Tbq 893, BH zero

## Formation Name: Mesaverde

10-29-73 GO perforate Mesaverde as follows: 6010'-6018' (8'), 6084'-6087' (3'), 6089'-6092' (3'), 6097'-6104' (7'), & 6138'-6145' (7') all 2 JSPF, 58 holes. Run & land tubing at 5990'. RU to Frac. Load hole w/ 133 bbls condensate. BD MV at 10 BPM 2600#. Dropping ball sealers, No ball action, No ball-off, Frac down Csq & Tbg, 15 BPM 2000 ATP, 21.840 gals Diesel, 30.500 lbs sand ISIP 1600. SI for 24 hrs for gel to break. Csg 675, Tbg 675 after 41 hrs. Flow well back, Heavily gas cut condensate, making water in slugs. Making emulsion and sand. Took samples. Break emulsion, shows 45% water cut. Swab & Flow well back. 11-2-73 RU rig. COOH w/ tubing, GIH w/ RBP & PKR Combinitation. Set RBP at 6200' and PKR at 6045', Isolating the top set of perfs. Swabbed 333 bbls water, Tbg showing blow, Csg at zero. Csg FL at 700 by acoustic. PKR released and reset at 6120, isolating just the bottom perfs. Swab btm Pt. Lookout perfs, fair blow of gas. Swab 60 bbls water. Blow down tog. Release PKR. PU RBP and reset at 6120', Set PKR at 6045', testing middle 3 sets of perfs. Lost 240 bbls KCl water to formation. Swabbing recovering very MUDDY Water. Each run slightly gas cut muddy water. Acoustical measure and tubing FL the same, (Communication behind pipe). RU Halliburton, Pump Hyflo3 - emulsion remover treatment in 3000 gals condensate at 5 BPM 2700 ATP. ISIP 2100 Swab well back 90% Muddy Water. Release PKR, Recover RBP. Mover RBP to 6045'. Set PKR at 5977'. Testing upper MV Perfs. Swabbed 10 bbls Muddy Water. Release & recover RBP & PKR from well. Run new PKR. 11-16-73 Set PKR at 5792', Test annulus 1000#, Test lines 2000#. BD formation at 4.5 BPM at 2400#, Cement w/ 200 sxs at 3 BPM

Hesitate to 1500#, WOC 2 hrs, Test Cement to 2000#. Released PKR. Pull Tbg. SDON. Tag Cmt at 5854'. Drill to 6115', test twice to 1100# for 5 mins while drilling past perfs, Held Okay. Drill cement to 6190", where free. Test Csg to 1050 for 5 mins okay. Ran bit down to 7240', tag fill, Reverse circulate cement, shale, & frac sand to 7245'. COOH

### **Both Formation Comments**

11-19-73 Run production tog & seal assembly as follows. Reverse out 90' of Frac Sand above PKR. Space out tubing w/ subs. Set BPV in hanger. Land in Model D w/ 18K compression. Equalize Tbg & lubricator, Pull BPV 11-26-73 Note of Additional Gallup Pay Zones bypassed

