

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT—" for such proposals

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

5. Lease Designation and Serial No.
080000-A

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

8. Well Name and No.

Simmons E-1

9. API Well No.

300450791200

10. Field and Pool, or Exploratory Area

Blanco Mesa Verde

11. County or Parish, State

San Juan County, New Mexico

SUBMIT IN TRIPLICATE

1. Type of Well

☐ Oil ☒ Gas ☐ Other

2. Name of Operator

D.J. Simmons Company, Ltd.

3. Address and Telephone No. 3005 Northridge Drive, Suite L, Farmington, NM 87401

505-326-3753

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Section 26, T-29N, R-9W

Surface Location: 790' FNL & 1550' FEL

Proposed Production Zone: 1390' FNL & 1827' FEL

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment Notice

TYPE OF ACTION

☐ Abandonment

☐ Recompletion

☐ Plugging Back

☐ Casing Repair

☐ Altering Casing

☐ Other Sidetrack

☐ Change of Plans

☐ New Construction

☐ Non-Routine Fracturing

☐ Water Shut-Off

☐ Conversion to Injection

☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depth for all markers and zones pertinent to this work.)*

SEE ENGINEERING NOTES ATTACHED

RECEIVED
AUG 2 8 1995
OIL CON. DIV.
DIST. 3

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

ROBERT L. CRABB

Signed

Robert L. Crabb

Title Agent for D.J. Simmons Company, Ltd. Date August 9, 1995

(This space for Federal or State office use)

APPROVED

Approved by

Title

Date

Conditions of approval, if any:

AUG 25 1995

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false statement or representations as to any matter within its jurisdiction.

DISTRICT MANAGER

HOLD C-104 in Suspension
for QD order

ENGINEERING NOTES

Simmons E-1

Blanco Mesa Verde Sidetrack
Directional Drilling Plan

Engineering Calculations

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS

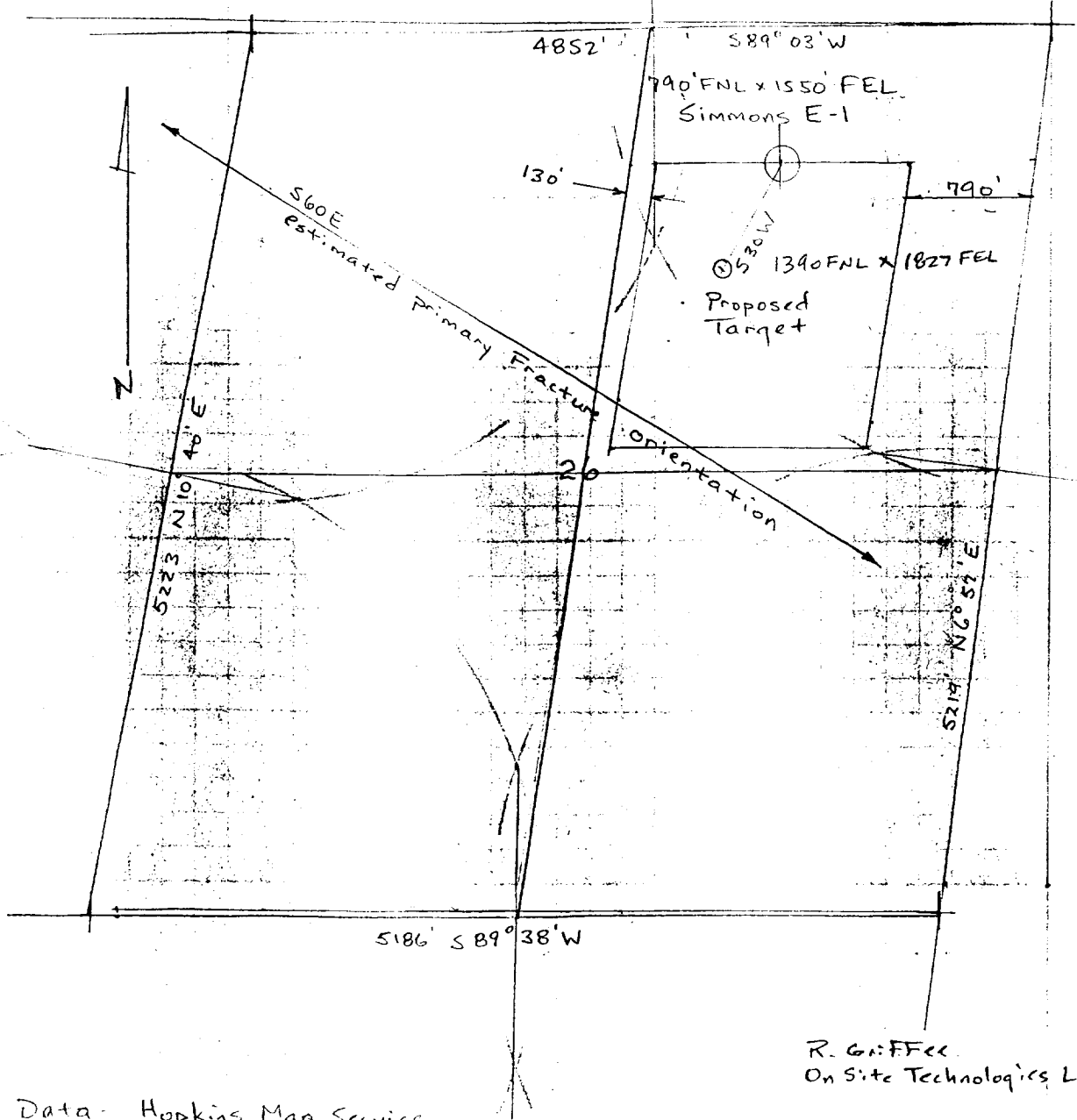


On Site Technologies Ltd.
R. GRIFFEE
7/21/95

7/7/95

SECTION 26 T29N R9W
San Juan County, NM

50 SHEETS
22-141 100 SHEETS
22-142 200 SHEETS
22-144



Data - Hopkins Map Service
BLM Survey

R. GIFFEE
On Site Technologies Ltd

Scale
0 1000
ft

SIMMONS E-1
Blanco MV Sidetrack

Operations Outline

1. Plug back open hole to 3800'. 160' inside 7" csg set @ 3960'.
2. Repair 7" x 8 3/4" annulus by squeeze cementing. Cement to Surface.
3. Cut Window in 7" csg 3700' - 3850'.
4. Directionally drill 6 1/4" hole to target
 - a. KOP = 3800'
 - b. build @ 10°/100' to 44° @ 4240' M.D. & 4198' TVD
 - c. Target Location - bottom of Point Lookout
668.66' South and 351.4' West of Surface Locn
Legal coordinates BKL:
1390.47 ENL x 1827.2 FEL
5. Log. Run 4 1/2" csg to surface. Cement TD to 3600' inside 7" csg.
6. Perf & Frac Mesa Verde sands.

Note - Irregular Section



7/21/95

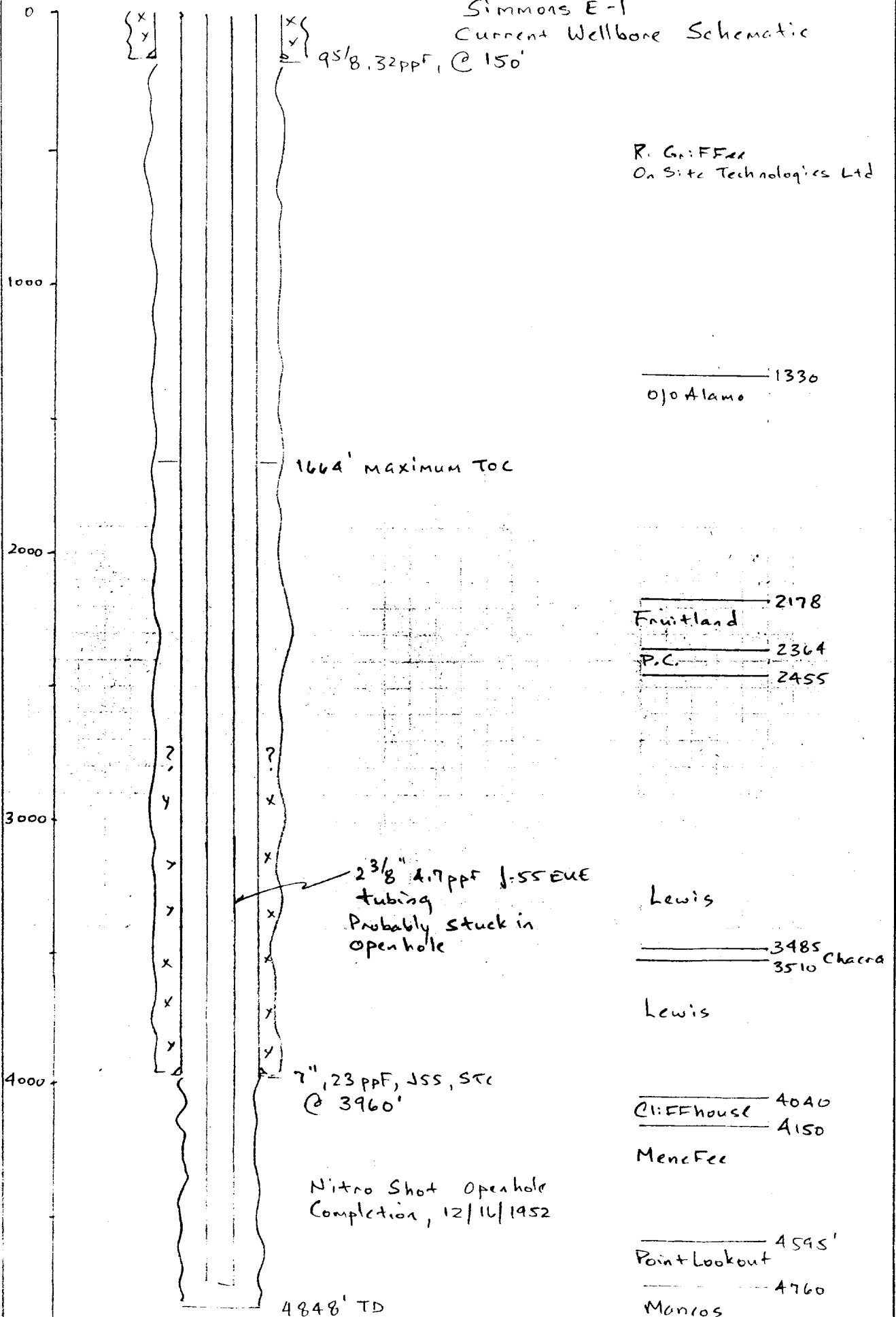
31

Simmons E-1 Current Wellbore Schematic

9 5/8" 32 ppf, @ 150'

R. G. FFE
On Site Technologies Ltd

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS



7/21/95

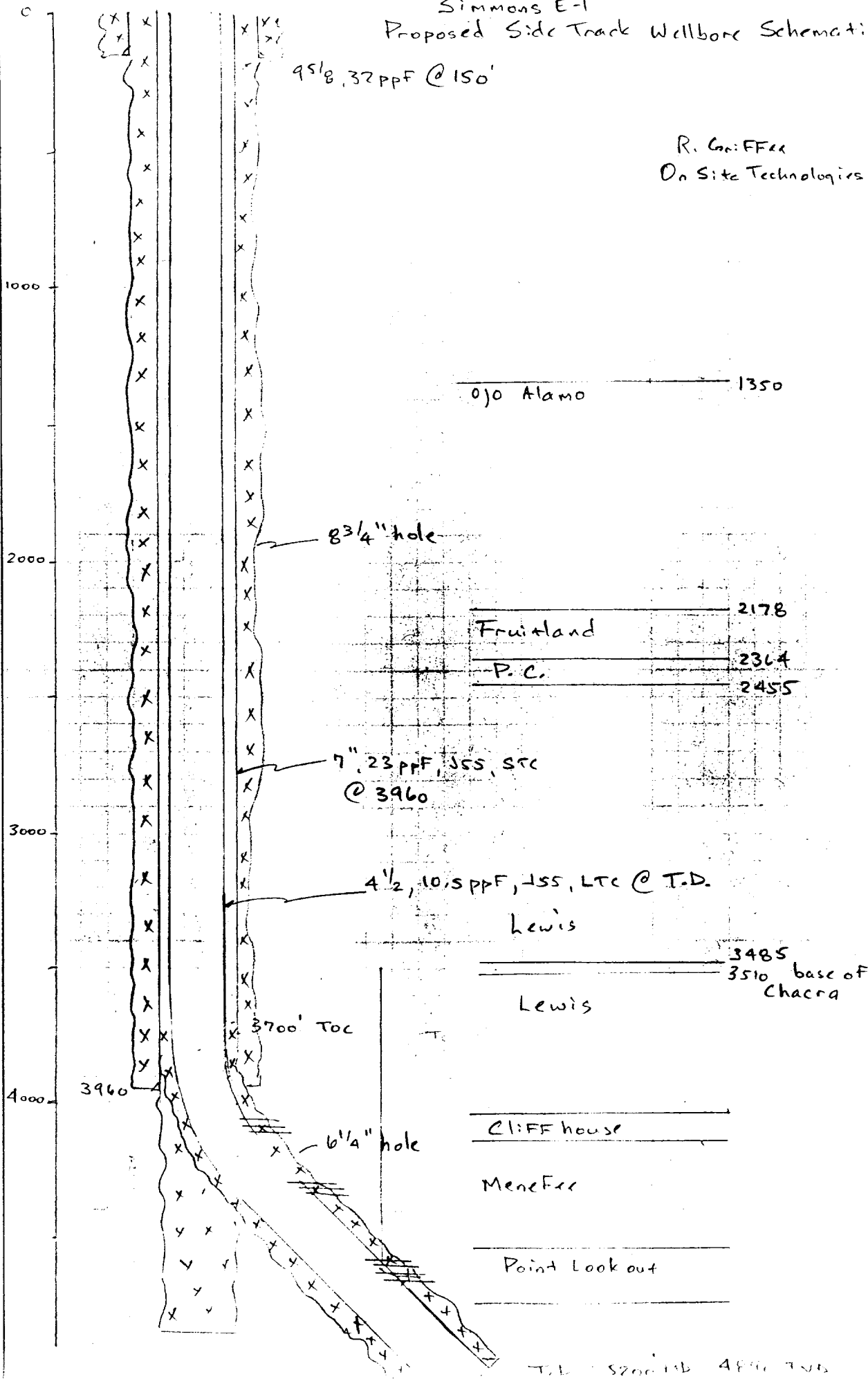
41

Simmons E-1 Proposed Side Track Wellbore Schematic

9 5/8" 32 PPF @ 150'

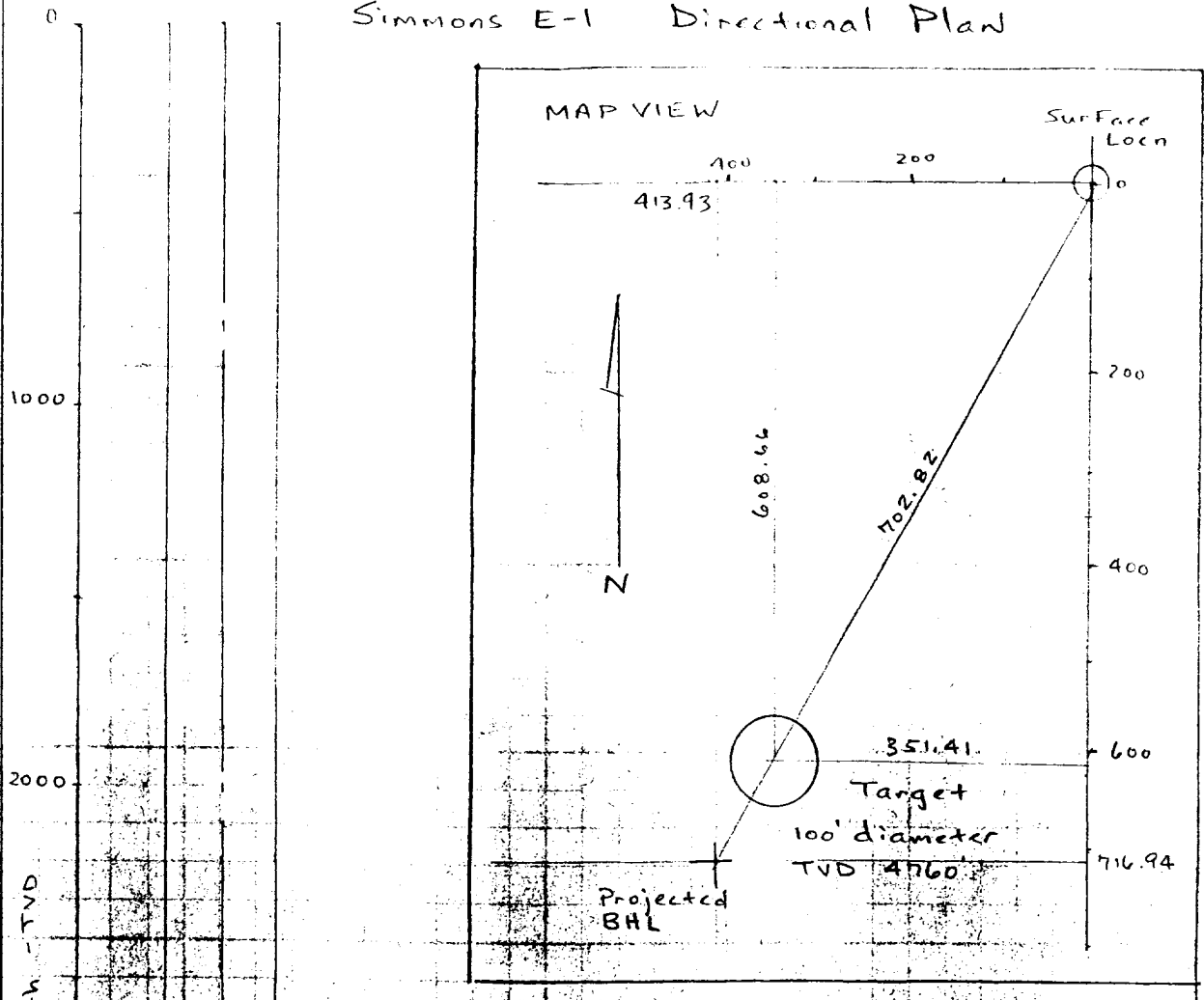
R. G. FFE
On Site Technologies Ltd

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS



Simmons E-1 Directional Plan

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS



R. GRIFFEE
On Site Technologies Ltd

Lewis

3485 Chacra
3510

Lewis Shale

Window 3700

3800' KOP 3850

4000 3960'

max angle 44°

Cliff House 4040'
4150'

Mene Fee

Point Lookout 4545'

4760'

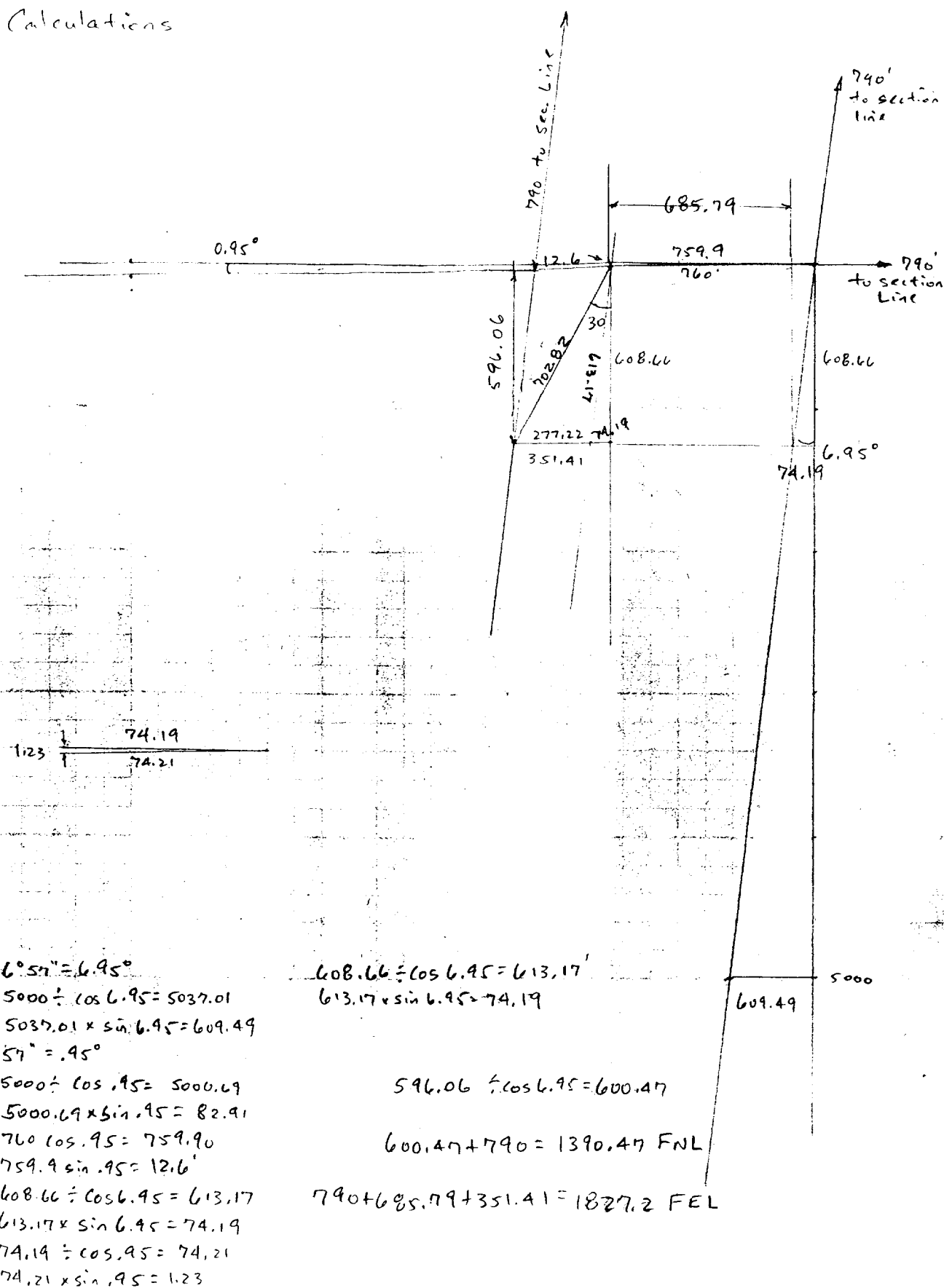
702.82

Simmons E-1

Build rate		10	deg/100 ft									
Measured Delta	Inclination	avg	Direction	Delta	Delta	Total	Total	South	West	South	West	
Depth	Course	(degrees)	Inclination	TVD	Departure	TVD	Departure	Delta	Delta	Coor	Coor	
Original Vertical Section												
0	0											
3800	3800	0	0 S30W	0.00	0.00	3800.00	0.00	0.00	0.00	0.00	0.00	0.00
Kick Off Point:		3800										
Build Section												
3800		0	0 S30W	0.00	0.00	3800.00	0.00	0.00	0.00			
3900	100	10	5 S30W	99.62	8.72	3899.62	8.72	7.55	4.36	7.55	4.36	
4000	100	20	15 S30W	96.59	25.88	3996.21	34.60	22.41	12.94	29.96	17.30	
4100	100	30	25 S30W	90.63	42.26	4086.84	76.86	36.60	21.13	66.56	38.43	
4200	100	40	35 S30W	81.92	57.36	4168.76	134.22	49.67	28.68	116.24	67.11	
4240	40	44	42 S30W	29.73	26.77	4198.48	160.98	23.18	13.38	139.41	80.49	
Hold Point:		4240										
Hold Section												
4300	60	44	44 S30W	43.16	41.68	4241.64	202.66	36.10	20.84	175.51	101.33	
4400	100	44	44 S30W	71.93	69.47	4313.58	272.13	60.16	34.73	235.67	136.06	
4500	100	44	44 S30W	71.93	69.47	4385.51	341.59	60.16	34.73	295.83	170.80	
4600	100	44	44 S30W	71.93	69.47	4457.45	411.06	60.16	34.73	355.99	205.53	
4700	100	44	44 S30W	71.93	69.47	4529.38	480.53	60.16	34.73	416.15	240.26	
4800	100	44	44 S30W	71.93	69.47	4601.31	549.99	60.16	34.73	476.31	275.00	
4900	100	44	44 S30W	71.93	69.47	4673.25	619.46	60.16	34.73	536.47	309.73	
5000	100	44	44 S30W	71.93	69.47	4745.18	688.92	60.16	34.73	596.62	344.46	
5020	20	44	44 S30W	14.39	13.89	4759.57	702.82	12.03	6.95	608.66	351.41	
5100	80	44	44 S30W	57.55	55.57	4817.12	758.39	48.13	27.79	656.78	379.19	
5200	100	44	44 S30W	71.93	69.47	4889.05	827.85	60.16	34.73	716.94	413.93	

7/21/95

Calculations



$$6^{\circ}57' = 6.95^{\circ}$$

$$5000 \div \cos 6.95 = 5037.01$$

$$5037.01 \times \sin 6.95 = 609.49$$

$$57' = .95^{\circ}$$

$$5000 \div \cos .95 = 5000.69$$

$$5000.69 \times \sin .95 = 82.91$$

$$760 \cos .95 = 759.90$$

$$759.9 \sin .95 = 12.6'$$

$$608.66 \div \cos 6.95 = 613.17$$

$$613.17 \times \sin 6.95 = 74.19$$

$$74.19 \div \cos .95 = 74.21$$

$$74.21 \times \sin .95 = 1.23$$

$$608.66 \div \cos 6.95 = 613.17'$$

$$613.17 \times \sin 6.95 = 74.19$$

$$596.06 \div \cos 6.95 = 600.47$$

$$600.47 + 790 = 1390.47 \text{ FNL}$$

$$790 + 685.79 + 351.41 = 1827.2 \text{ FEL}$$

Simmons E-1

790' FNL x 1550' FEL, Section 26, T29N, R9W, San Juan County, NM

**MesaVerde Sidetrack
Plug Back and Casing Repair Operations**

For: Mr. John Byrum, D. J. Simmons Co.

Prepared By: R. Griffie, 8/21/95

Step 1, Initial Preparation, Prior to moving in rig.

- 1(a). Construct Blowdown Pit, Blade Location.
- 1(b). Install and/or test rig anchors.
- 1(c). Attempt to blow well down.
On Site consultant will attempt to blow well down appx one day prior to moving rig in.
assume 4 hours + mileage.

Step 2, MIRU Completion Rig

Operational Day 1 (12.5 hours calculated) Step 2(a) through 4(a).

- 2(a). Road rig to location.
assume 1 hour travel from previous location (Could occur the night before rig operations commence). Have water truck on location in timely fashion based on previous blow down results.
- 2(b). Rig up. Set pump and pit. Kill well with water if required. Nipple down well head. Nipple up 3000 psi BOPE. NU Stripping head. Lay blow down lines to pit.

Step 3. Pull 2 3/8" tubing.

- 3(a). Pull on 2 3/8" tubing. If tubing is free, procede to step 3(d).
- 3(b). Take stretch measurements. Determine if tubing is stuck in casing or in open hole.
- 3(c). RU Wireline. Jet cut tubing below 7" casing shoe at appx 3960'.
- 3(d). POOH with 2 3/8" tubing. SLM. Visually inspect, lay down.

Step 4. 7" Casing Scraper Run.

- 4(a). PU 7" casing scraper and SN. Install wireline retrieveable standing valve in SN. Pick up 2 3/8" work string and RIH with scraper to casing shoe at +/- 3960'. Pressure test tbg to 1000 psi with rig pump. Retrieve plug on rig wireline. Insure that scraper is calipered to 7" casing ID. This step is critical to the success of Step 5, and the reduction of risk in sticking the cement retainer.

Operational Day 2 (9 hours calculated) Step 4(b) through 5(h).

- 4(b). POOH with tubing and scraper. Stand back work string and lay down scraper and SN.

Step 5. Plug Number 1, Open Hole Mesa Verde.

- 5(a). RU Wireline and Run CBL from the 7" casing shoe at 3960' to 250 ft above the discovered actual cement top. Check for stringers above cement top. Record Top of Cement depth.
- 5(b). Pick up 7" tbg set cement retainer. RIH on 2 3/8" work string to 3910'. Set retainer.
- 5(c). Pressure Test work string to 1000 psi.
- 5(d). Sting out of retainer. Load casing with water. Attempt to pressure test casing, above retainer to 500 psi.
- 5(e). Sting into retainer. Rig up Western Co. Establish injection rate into Mesa Verde open hole.

Cement Volume Calculation

TD = 4848', Retainer Depth = 3910', Shoe Depth = 3960', 6 1/4" hole capacity = .2131 cf/ft,
7" casing capacity = 0.2210 cf/ft
 $0.2131 \text{ cf/ft} \times (4848 - 3960) = 189.23 \text{ cf}$
Use 20% excess
 $189.23 \text{ cf} \times 1.2 = 227.08 \text{ cf}$
 $0.2141 \text{ cf/ft} \times (3960 - 3910) = 10.71 \text{ cf}$
 $(227.08 + 10.71) \text{ cf} / 1.15 \text{ cf/sk} = 207 \text{ sks}$, round up to 210 sks.

- 5(f). Mix 210 sks Class 'b' slurry (reduce volume correspondingly if tubing was jet cut above). Squeeze Mesa Verde open hole with 200 sks.
- 5(g). Sting out of retainer. Spot 10 sks slurry on top of retainer.
- 5(h). TOH with 2 3/8" work string. Stand back tbg, lay down stinger.

Step 6. Casing Repair (7") from Retainer to Cement Top

If the 7" casing successfully pressure tests to 500 psi in Step 5(d) above, Skip all of Step 6, go to Step 7.

Operational Day 3 (14 hours calculated) Step 6(a) through 6(c)

- 6(a). PU 7" test packer. RIH with 2 3/8" work string. Isolate casing leak(s) below the cement top. Continue isolating leak(s) above cement top. A retrievable bridge plug may be required.
- 6(b). Squeeze casing leak(s) below the discovered top of cement as required using a test packer and retrievable bridge plug if required.
- 6(c). WOC overnight

Operational Day 4 (10 hours calculated) Step 6(d)

- 6(d). PU 6 1/4" bit. RIH on workstring. Drill out cement remaining in 7" casing. POOH. PU 7" test packer and RIH on workstring. Pressure test repaired casing interval to 500 psi with rig pump. POOH, lay down packer.

Step 7. Squeeze Cementing above primary Top of Cement to Surface

Operational Day 5 (6 1/2 hours calculated) Step 7(a) through 7(g).

Alter procedure as required depending on leaks discovered in step 6(a).

- 7(a). If required, perforate two squeeze holes at the top of cement found by analyzing bond log from step 5(a) (+/-). Rig down wireline.
- 7(b). Establish injection rate down casing, through squeeze holes, up 7" annulus, through Braden head. Use rig pump and tank.
- 7(c). PU 7" cement retainer. RIH with work string to 30' above the squeeze holes determined in step 7(a), or to a depth determined by leak isolation in step 6(a). Set retainer.
- 7(d). RU Western Co. Establish injection rate under retainer, through squeeze holes, up 7" annulus, through Braden head.

Cement Volume Calculation, Cement from Primary Top of Cement to Surface

8 3/4" hole x 7" casing annulus capacity; 0.1503 cf/lf
10 3/4 casing x 7" casing annulus capacity; 0.2993 cf/lf

0.1503 cf/lf x (Squeeze hole depth - 114) lf = _____ cf
use 15% excess, _____ cf x 1.2 = _____ cf
0.2993 cf/lf x 114 lf = 34.12 cf
(_____ + 34.12) cf / 1.15 cf/lf = _____ sks

- 7(e). Mix _____ sks Class 'b' slurry. Squeeze under retainer through squeeze holes, up annulus and through Braden head. Bring cement top to Surface

7(f). Sting out of retainer. Spot 5 sks slurry on top of retainer.

7(g). POOH with tubing. Lay down tbg and stinger. WOC over night.

Operational Day 6 (11 hours calculated) Step 7(h) through 9(b).

7(h). Pick up 6 1/4" bit and run in hole with workstring. Drill out cement and retainer remaining in 7" casing. Pressure test repaired casing interval to 500 psi with rig pump.

7(i). TOOH with work string.

Step 8. Casing Scraper Run

8(a). Pick up casing 7" casing scraper and run to retainer at 3910'. POOH and lay down work string and scraper.

Step 9. Rig down. MOL.

9(a). ND BOPE. NU wellhead.

9(b). Rig down and move to next location.

Simmons E-1

790' FNL x 1550' FEL, Section 26, T29N, R9W, San Juan County, NM

**MesaVerde Sidetrack
4 1/2" Casing and Cementing Operation**

Discussion

The following casing and cementing program is designed to install a 4 1/2" production casing string in the designed 45 degree (+/-) sidetracked hole. Casing strengths and specifications have been selected to provide adequate joint strength for running through the curve section of the directional well bore and to provide satisfactory burst strength to facilitate a nitrified hydraulic fracture treatment. The cementing program is designed to place cement in the casing / open hole annulus, with the top of the cement to be located inside the 7" casing just below the bottom of the Chacra formation. This is to allow a completion in the Chacra formation at some later date, as the operator chooses. If the option to complete the Chacra is selected at a later date, the 4 1/2" casing would be backed off, just above the cement top, so that the 7" casing could be perforated, and the Chacra zone could be hydraulically fractured after re-running the 4 1/2" casing string.

Casing Program

Run 4 1/2", 11.6 ppf, J55, LTC from new sidetracked TD to surface. LTC threads will be required due to the 45 degree hole. Install stage collar at 3520 ft (measured depth), just below the bottom of the Chacra formation. Note; 7" 23 ppf, J55, STC is set at 3960'. A window will have been cut in the 7" casing string to facilitate sidetracking operations from 3700' to 3850'. Centralize casing with 1 centralizer per joint. Install guide shoe on bottom and float collar one joint from bottom.

4 1/2", 11.6 ppf, J55, LTC data:

ID = 4.000", Drift ID = 3.875", Coupling OD = 5"

Collapse resistance = 4,960 psi, Internal Yield Pressure = 5350 psi

Body Tensile Yield = 184,000 lbs, Joint Strength = 162,000 lbs

7", 23 ppf, J55 STC data;

ID = 6.366", Drift ID = 6.241"

Clearance Calculations

4 1/2" csg inside 7", 20 ppf csg

$(6.366 - 5.000) / 2 = 0.683"$, assuming centered pipe

Cementing Program

Cement with 180 sks of Class 'b' neat with pumping additives as required by pilot testing. This slurry volume is calculated to bring the cement top to 3520 ft, using 20% excess over the open hole volume. Drop stage tool bomb and open stage collar ports. Circulate excess cement to the surface. Mix 70 bbls of packer fluid with oxygen scavenger and clay stabilizer and circulate in place from the stage collar to the surface. Drop closing plug and displace with water. WOC 72 hours prior to commencing further completion operations.

Cement Volume Calculations

annular capacity 6 1/4" hole x 4 1/2" casing = 0.1026 cf/ft
annular capacity 7", 23 ppf csg x 4 1/2" casing = 0.1106 cf/ft
capacity of 4 1/2", 11.6 ppf casing = 0.0872 cf/ft

New TD = 5200 ft, measured Depth and 4890 ft, true vertical depth
Top of Window = 3700 ft
Stage Collar depth = 3520 ft

Open hole volume
(5200 - 3700)ft x 0.1026 cf/ft = 153.90 cf
use 20% excess
153.90 x 1.2 = 184.68 cf

Volume in 7" x 4 1/2" annulus
(3700 - 3520) x 0.1106 cf/ft = 19.91 cf

Shoe volume
40 ft x 0.0872 cf/ft = 3.49 cf

Slurry: Class 'b' neat. Yield 1.15 cf/sk

184.68 cf + 19.91 cf + 3.49 cf = 208.08 cf
208.08 cf / 1.15 cf/sk = 181 sks.

Packer Fluid Volume Calculation

3520 ft x 0.1106 cf /ft / 5.615 cf/bbl = 69.3 bbls