

FOR OGCC USE ONLY

This form is to be submitted within thirty (30) days of a well's completion. If the well is deepened or sidetracked, a new Form 5 will be required. If an attempt has been made to complete/produce a well, then the operator shall submit a Form 5A (Completed Interval Report). If the well has been plugged, submit Form 6 (Well Abandonment Report).

RECEIVED

60000

ET	OE	PR	ES
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1. OGCC Operator Number: 27580		4. Contact Name & Phone	
2. Name of Operator: Energy Operating Company, Inc.		Dan Hall	
3. Address: 3333 S. Wadsworth Blvd., #D-218		No: 303-969-9610	
City: Lakewood	State: CO	Zip: 80227	Fax: 303-969-9644
5. API Number: 05- 023-05004		6. County: Costilla	
7. Well Name: Williamson		Number: 1	
8. Location (QtrQtr, Sec, Twp, Rng, Meridian): SESW, Section 23-T1N-R72W			
Footage at Surface: 664' FSL and 2346' FWL		9. Was a directional survey run? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
If directional, footage at Top of Prod. Zone: n/a			
If directional, footage at Bottom Hole: 785' FSL and 2601' FWL (SESW)			
10. Field Name: Wildcat		Field Number: 99999	
11. Federal, Indian or State lease number: n/a			
12. Spud Date 6-3-99		13. Date TD Reached 6-23-99	
14. Date Completed or D&A 6-26-99			
16. Total Depth MD 6657' TVD 6647'		17. Plug Back Total Depth MD -- TVD --	
18. Was a Mud Log Run? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		19. Elevations	
** A copy of all electric and mud log runs must be submitted.		GR 8350' KB 8362'	
20. List Electric Logs Run:			
DIL-SFL-SP and BHC Sonic-GR-CAL			

Complete the
Attachment Checklist

Oper OGCC

Electric Logs (1 full set required)		X
Casing Cement Job Summaries		X
Directional Survey		X
Geologic Report		X
Mud Log		X
DST Report		
Core Analysis		
Other		

Well Classification

<input checked="" type="checkbox"/>	Dry	<input type="checkbox"/>	Oil	<input type="checkbox"/>	Gas	<input type="checkbox"/>	Coalbed
<input type="checkbox"/>	Stratigraphic		<input type="checkbox"/>		Disposal		
<input type="checkbox"/>	Enhanced Recovery						
<input type="checkbox"/>	Gas Storage		<input type="checkbox"/>		Observation		
<input type="checkbox"/>	Other:						

CASING, LINER and CEMENT

21

Submit contractor's cement job summary for each string cemented.

[illegible]

FORMATION LOG INTERVALS and TEST ZONES

22.

[illegible]

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name Dan Hall

Signed: Don Hill Title: President Date: 11-15-00



CEMENTERS, INC.
P. O. BOX 302
FARMINGTON, NEW MEXICO 87499
(505) 632-3683

JOB TICKET 9540

Customer: <u>Energy Operators</u>			Well No.: <u>Williamson #1</u>		Lease:
Address:			County:		State: <u>CA</u>
City	State	Zip	Field:		
Date of Job: <u>6-4-99</u>			Size of Hole: <u>12 1/4</u>		Depth: <u>912</u> Ft.
Type of Job: <u>9 5/8 sur.</u>			Size & Wt. of Casing: <u>909" 9 5/8</u>		Depth: <u>909</u> Ft.
New Well <input checked="" type="checkbox"/> Old Well <input type="checkbox"/> Other <input type="checkbox"/>			Size & Wt. of Pipe:		Depth: Ft.
Pump Truck Used: <u>101</u>			Top Plugs: <u>9 5/8 Rubber</u>		Type:
Bulk Truck Used: <u>111</u>			Bottom Plugs:		Type:
Mileage: <u>200</u>			Ton Mileage: <u>200</u>		

Cement and Additive Data:			
SACKS	BRAND	TYPE	OTHER
225	Class B		1/4 # celloflake, 2% metasilicate, 1% KCl
150	Class B		1/4 # celloflake, 2% CaCl ₂

Slurry Weight: 12.5 - 15.6 lbs./gal.

Slurry Volume: lbs./cu. ft.

225 - 150 Sacks Cement Treated with 2 % of C-lite, CaCl₂

Price Ref. No.	Description	Rate
PR 2	SERVICE chg	1038 28
PR 10	pump truck mileage chg 200 mi. @ 2 ³⁵ per mi	470 00
PR 12	pickup truck mileage chg 200 mi. @ 1 ⁰⁰ per mi	220 00
PR 15	Handling chg 384 ft @ 1 ⁰⁰ per ft	384 00
PR 16	ton mileage chg 31069 # @ 0.95 per ton	3426 55
PR 31	375 sx cement @ 8 ⁰⁰ per sx	3037 50
PR 35	94 lb celloflake @ 1 ⁰⁰ per lb	103 40
PR 36	425 lb metasilicate @ 1 ⁰⁰ per lb	510 00
PR 33	3 sx CaCl ₂ @ 35 ⁰⁰ per sx	105 00
su 43	9 5/8 cement nose shoe	244 00
	9 5/8 float collar	425 00
su 44	6 9 5/8 cent @ 64 ⁰⁰ per cent	384 00
su 46	9 5/8 rubber plug	112 00
	9 5/8 stop ring	31 00
su 90	Thread lock	27 50
PR 34	850 # KCl @ .21 per lb.	178 50
		10697 33
	LESS 10%	1069 73
		9627 00
	3% tax on materials	139 28
		9766 88
	TOTAL	

CONTRACT CONDITIONS: (This agreement must be signed before work is commenced)

The undersigned, as authorized agent of the customer, agrees and acknowledges that the services, materials, products and supplies provided for in this order shall be subject to the terms and conditions appearing on the front and reverse sides of order without the consent of an authorized representative of CEMENTERS INC.

SIGNED: Tom Fraley
AGENT OF OWNER OR CONTRACTOR

THE ABOVE MATERIAL AND SERVICE
ORDERED BY CUSTOMER AND RECEIVED BY:

(WELL OWNER OPERATOR OR AGENT)

White Copy — Operator Canary Copy — Office Pink Copy — Invoice Gold Copy — File

WELLSITE GEOLOGY REPORT



Energy Operating as operator for Ventero Exploration
Williamson #1 Well
SE SW Sec 23 T1N R72W
Costilla County, Colorado

Prepared by:
Foxpark Oil & Gas, Inc.
Geologist: John A. Morel
Wyoming Prof. Geol. #833
AAPG Cert. Petr. Geol. #4725
2792 S. Fillmore St., Denver, CO 80210
(303) 757-8230

**Energy Operating as operator for Ventero Exploration
Williamson #1 Well
SE SW Sec 23 T1N R72W, Costilla County, Colorado**

RECOMMENDATION

In consideration of the available information, it is recommended that the Williamson #1 well be plugged and abandoned. Neither the Dakota sand nor any of the Cretaceous formations were found. The sediments drilled were unconsolidated valley fill (Santa Fe formation), volcanics (probably Miocene and Oligocene Conejos formation equivalents), and coarse crystalline Precambrian basement.

WELL DATA

Operator: Energy Operating as operator for Ventero Exploration
3333 S. Wadsworth Blvd., #218
Lakewood, Colorado 80227

Name: Williamson #1
Location: 656' FSL 1990' FWL
SW SE Sec 23 T1N R72W
Wildcat -- Costilla County, Colorado

Elevation: 5350' GL 5362' KB

Spud Date: June 3, 1999 TD Date: June 23, 1999

Surface Pipe: 9 5/8" set at 909'

Total Depth: Driller 6657', in the Precambrian basement

Cores or Tests: None

Logging: Halliburton Logging Services, Farmington, NM, Chuck Perry, Engr
SP, Dual Induction, Shallow Guard -- 6657' to surface casing
Gamma, Sonic -- 6657' to surface casing

Plugged and abandoned, June 25, 1999

Company Representative: John Morel, geologist for Ventero Exploration

Contractor: Cyclone Rig #4, Mike Smith, tool pusher

Engineering Supervision: Tom Fraley, field engineer for Energy Operating

Mudlogging: Pason Systems, Grand Junction, CO, Art Curtis and Greg Smith

**Energy Operating as operator for Ventero Exploration
Williamson #1 Well
SE SW Sec 23 T1N R72W, Costilla County, Colorado**

FORMATION TOPS

<u>Formation</u>	<u>Sample Top</u>	<u>Log Top</u>	8362' KB	<u>Datum</u>
Alluvial Valley Fill	surface	0		+8362
Basalt	875	880		+7487
Upper Santa Fe Alluvial Fans	1400	1400		+6962
Lower Santa Fe Volcanics	2400	2400		+5962
Oligocene Tuffs	3500	3500		+4862
Coarse crystalline mafics	6320	6233		+2129
Metamorphic Granite	6550	6524		+1838
Fresh Granite	6600	6600		+1762
TD	6657 driller	6642 logger		+1720

FORMATION DESCRIPTIONS

Alluvial Valley Fill: Unconsolidated soil, sandstone, and igneous/metamorphic cobbles. Sandstone, clear to frosted, fine to coarse grain, poorly sorted, angular, all free grains. Cobbles, well rounded, highly weathered, granites and schists.

Basalt: Basalt and Andesite, black and red/grey, microcrystalline, hard, angular cuttings to shards.

Upper Santa Fe: Sandstone, clear to frosted, medium to coarse grained, poorly sorted, angular, unconsolidated, with some pink/orange grains (feldspars?). SS at 2300' clear to frosted, upper medium grained, well sorted, well rounded, unconsolidated.

Lower Santa Fe: Andesite with Basalts, Tuffs, and Sands, red/orange/grey, microcrystalline, hard, angular cuttings. Basalts same as upper Santa Fe. Tuffs, buff to cream, soft to friable. SS as above.

Oligocene Volcanics: Andesitic tuffs, reddish brown, soft to friable, blocky to sub-platey, microcrystalline, similar in appearance to brown shale. Some rhyolite, white, hard, microcrystalline ground mass with small visible quartz crystals. Similar in appearance to a very fine grained sandstone.

Coarse crystalline mafic rock: Dark grey to black crystal clusters mainly amphibole, pyroxenes, and quartz; hard, angular with many well developed crystal faces.

Metamorphic Granite: pink and light orange; well developed mica, feldspar, and quartz crystals; firm to friable, chalky texture with some clays.

Fresh Granite: bright orange chips containing K-feldspar and quartz; sharp, angular fragments with few pieces of mica and dark minerals.

**Energy Operating as operator for Ventero Exploration
Williamson #1 Well
SE SW Sec 23 T1N R72W, Costilla County, Colorado**

HYDROCARBON SHOWS

No background gas. No stain, cut, or fluorescence.
One unit of methane background was present from 3500' to 3600'.

DISCUSSION

The original prognosis for this well placed the Mancos shale below the unconformity at 3500'. This was based on 2-D and 3-D seismic data that showed an anticlinal feature at this location and an unconformity at 3500'. The regional uplift at the end of the Laramide orogeny (55 mybp) eroded varying thicknesses of pre-Tertiary sediments in the San Luis valley. The angular unconformity seen on seismic was interpreted to be the unconformity between the Tertiary and pre-Tertiary sediments. Neither the unconformity nor the pre-Tertiary sediments are seen in outcrop or nearby wells.

Unconsolidated valley fill was present from the surface to 880 feet. Then interbedded basalts and sands were found from 880' to 1400'. Unconsolidated sands were again present from 1400' to 2400'. This entire package from surface to 2400' is interpreted to be the Santa Fe formation. The basalts are interpreted to correlate to the 18 mybp basalt flows documented in USGS publication MF-2312-B describing the Ojito Peak Quadrangle 20 miles north of this well.

The "Top 500" seismic marker correlates with the top of the basalt package when an average velocity of 7000 ft/sec is used. The "Base 500" seismic marker correlates to the base of the basalt package when an average velocity of 8000 ft/sec is used (12,000 ft/sec basalt interval velocity). Both average velocities are close to the stacking velocities derived during processing.

A sequence of interbedded andesites and unconsolidated sands is present between 2400' and 3500'. The presence of andesite could be the transition into the Conejos formation, about 28 mybp. The predominantly volcanic package is interpreted to correlate with the Oligocene volcanics below the Santa Fe formation as described in USGS publication MF-2312-F.

The "Top 800" seismic marker correlates with the transition from predominantly unconsolidated sands to interbedded andesites and sands at 2400'. An interval velocity of 7000 ft/sec in the sand produces a lower average velocity to 7840 ft/sec. The "Base 800" seismic marker correlates with a transition within the volcanic package from primarily andesites to primarily andesitic tuffs at 3500 feet. An interval velocity of 13,000 ft/sec in the andesites produces an average velocity of 9500 ft/sec. Again, these velocities are close to the stacking velocities derived during processing.

The "Base 800" marker was particularly important because it represents an angular unconformity. The original interpretation was that it is the unconformity between Tertiary and pre-Tertiary strata. Drilling has demonstrated that it is an unconformity between andesites and andesitic tuffs. The volcanic sequence continues to 6320'.

**Energy Operating as operator for Ventero Exploration
Williamson #1 Well
SE SW Sec 23 T1N R72W, Costilla County, Colorado**

Coarse crystalline rocks began at 6320 and continue to total depth. They began with a hard, dense, mafic rock containing amphiboles, pyroxenes, and quartz. It is described in the mudlog as amphibolite. The next lithology is metamorphic granite containing large muscovite flakes and altered feldspar crystals. The last lithology penetrated was fresh granite. The feldspars were bright orange with quartz crystals, mica, and specs of dark minerals. These three lithologies represent the Precambrian basement complex.

Drilling was fast and easy throughout the volcanic sequence, but the bit wore out quickly in the basement complex.

The unconformity at 6320 jumps directly from the Tertiary into the Precambrian. All of the Paleozoic and Mesozoic sequences are missing. The Dakota sandstone and the Mancos shale packages were the primary targets. Neither they nor any of the Cretaceous section were present.

On the basis of no shows and no Cretaceous sediments this well is recommended to be plugged and abandoned.

DEVIATION RECORD

Depth	Deviation	Depth	Deviation
384	$\frac{3}{4}$	3191	1
612	$\frac{1}{2}$	3384	$1 \frac{1}{2}$
884	$\frac{3}{4}$	3549	$1 \frac{1}{2}$
1387	$1 \frac{1}{2}$	3754	$4 \frac{1}{4}$
1887	$\frac{3}{4}$	3840	4
2451	2	4131	$2 \frac{3}{4}$
2641	$3 \frac{3}{4}$	4221	4
2800	$5 \frac{1}{2}$	4344	$4 \frac{3}{4}$
2859	4	4469	6
2919	$3 \frac{3}{4}$	4532	$5 \frac{3}{4}$
3009	$3 \frac{1}{4}$	4596	6
		4658	7

Switching to mud motor and MWD equipment.
MWD surveys are attached.

BIT RECORD

No.	Size	Make	Type	Depth Out	Footage
1	$12 \frac{1}{4}$	HTC	ATJ-1S	909	909
2	$8 \frac{3}{4}$	HTC	H-09	2660	1751
3	$8 \frac{3}{4}$	HTC	GT-18	4668	2008
4	$8 \frac{3}{4}$	HTC	GT-09	6210	1542
5	$8 \frac{3}{4}$	HTC	H-09	6657	447

**Energy Operating as operator for Ventero Exploration
Williamson #1 Well
SE SW Sec 23 T1N R72W, Costilla County, Colorado**

DAILY OPERATIONS

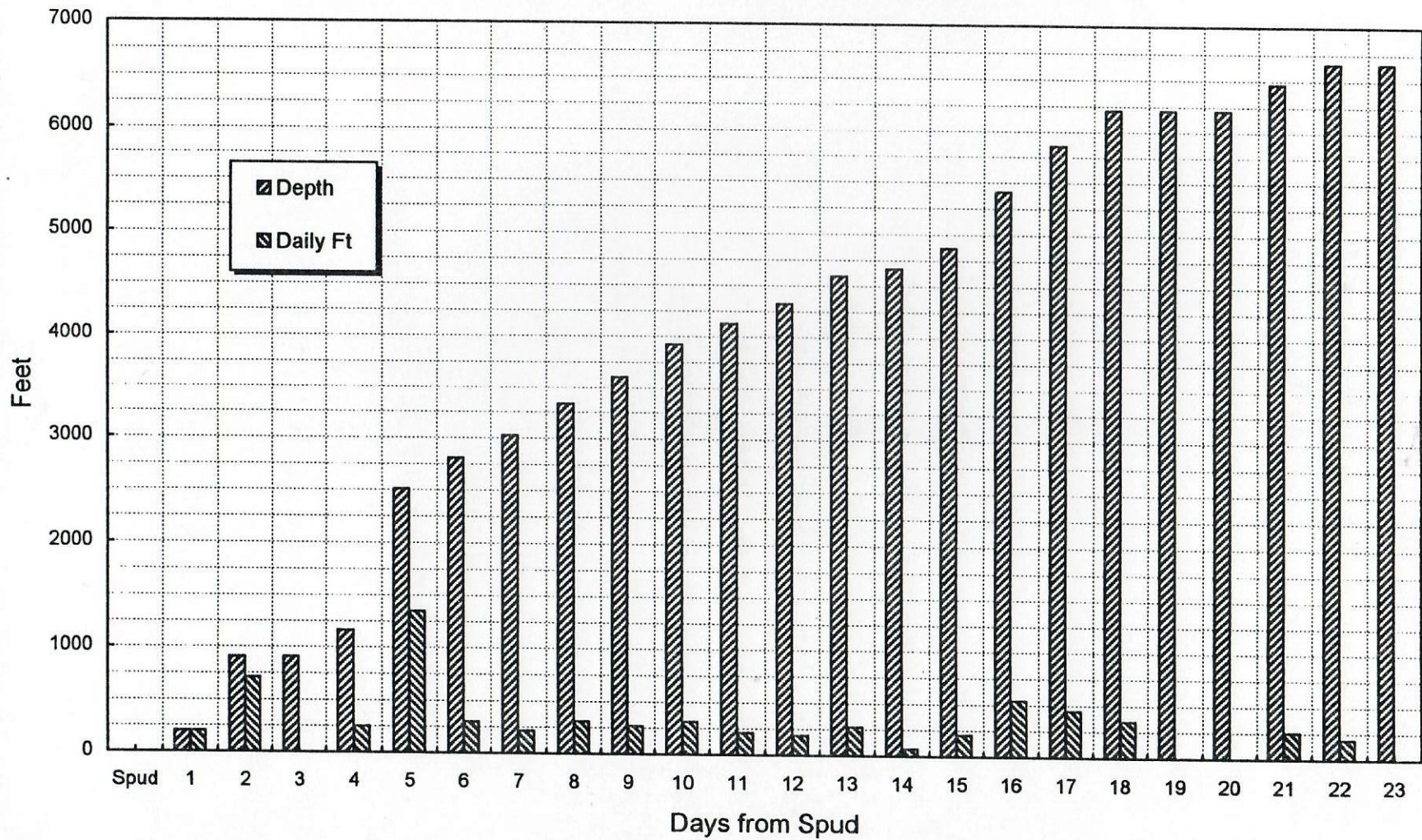
Day	Date	Depth at 8AM	Footage in 24 hrs	Operation	Bit #	WOB	RPM
Spud	6/3	12:00AM		drilling	1A		
1	6/3	198	198	drilling	1A		
2	6/4	909	711	running casing			
3	6/5	909	0	WOBOP			
4	6/6	1160	250	drilling	1	35k	80
5	6/7	2510	1350	drilling	1	20k	75
6	6/8	2810	300	drilling	2	20k	96
7	6/9	3025	215	drilling	2	10k	100
8	6/10	3335	310	drilling	2	25k	100
9	6/11	3605	270	drilling	3	25k	100
10	6/12	3922	317	drilling	3	15k	76
11	6/13	4131	209	drilling	3	20k	72
12	6/14	4322	181	drilling	3	10/15k	72
13	6/15	4596	274	drilling	3	8/10k	72
14	6/16	4668	72	pick up MWD	4		
15	6/17	4872	204	drilling	4	25k	55+100
16	6/18	5412	540	drilling	4	25k	55+100
17	6/19	5860	448	drilling	4	30k	60+100
18	6/20	6210	350	tripping for new bit	5		
19	6/21	6210	0	picking up reamer	5		
20	6/22	6210	0	tripping in hole	5		
21	6/23	6466	256	drilling	5	30k	50+100
22	6/24	6657	191	prep to log			
23	6/25	6657	0	prep to P&A			

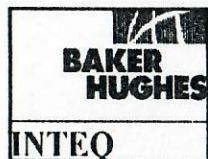
**Energy Operating as operator for Ventero Exploration
Williamson #1 Well
SE SW Sec 23 T1N R72W, Costilla County, Colorado**

MUD RECORD

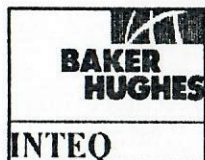
Day	Wt	Vis	WL	FC	pH	CL	LCM
1	8.7	49					
2	9.0	74 for casing					
3	nc						
4	8.4	28	nc	nc	10.0	300	
5	8.9	37	12.4	2/32	9.0	200	
6	8.9	36	10.8	2/32	9.0	600	
7	8.9	34	10.0	1/32	9.0	300	
8	9.0	34	10.0	1/32	9.0	200	
9	9.0	34	10.0	2/32	9.0	300	
10	8.9	35	8.4	2/32	9.0	200	
11	9.0	33	9.2	2/32	9.0	200	
12	8.9	32	10.8	2/32	10.0	200	
13	8.9	31	10.4	2/32	9.0	200	
14	8.9	31	10.4	2/32	9.0	200	
15	9.0	37	9.4	2/32	9.0	200	
16	8.8	37	9.4	2/32	9.0	200	
17	8.8	33	9.4	2/32	9.5	200	
18	8.8	33	9.4	2/32	9.0	200	
19	8.9	34	9.6	2/32	9.0	200	
20	8.9	37	8.8	2/32	9.0	200	
21	9.0	37	8.6	2/32	8.5	200	
22	9.0	52	8.6	2/32	8.5	200	
23	9.0	52	8.6	2/32	8.5	200	

Well Depth and Daily Penetration
Williamson #1, T1N, R72W, Costilla County, Colorado



Company: Energy OperatingField: WildcatCty/Blk/Par: CostillaWell Name: Williamson # 1Rig: Cyclone Rig #4Job Number: 106568Magnetic Decl.: 10.33Grid Corr.: Total Survey Corr.: 10.33Target Info: Calculation Method Minimum CurvatureProposed Azimuth 0Depth Reference RKBTie Into: Surface Casing @ 912

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates		Closure		DLS (°/100')	Bld Rate (°/100')	Wlk Rate (°/100')
								N/S (ft)	E/W (ft)	Dist (ft)	Ang (°)			
1	MWD	1008	0.50	281.20	96	1008.00	0.08	0.08 N	0.41 W	0.42	281.20	0.52	0.5	292.9
2	MWD	1484	2.10	254.70	476	1483.86	-1.82	1.82 S	10.86 W	11.01	260.50	0.35	0.3	-5.6
3	MWD	1960	1.00	273.30	476	1959.68	-3.88	3.88 S	23.42 W	23.74	260.60	0.25	-0.2	3.9
4	MWD	2436	2.50	297.50	476	2435.45	1.15	1.15 N	36.78 W	36.79	271.80	0.34	0.3	5.1
5	MWD	2912	3.20	324.00	476	2910.88	16.70	16.70 N	53.79 W	56.33	287.24	0.31	0.1	5.6
6	MWD	3388	1.90	280.90	476	3386.44	28.94	28.94 N	69.35 W	75.15	292.65	0.47	-0.3	-9.1
7	MWD	3864	3.40	267.30	476	3861.92	29.77	29.77 N	91.20 W	95.94	288.08	0.34	0.3	-2.9
8	MWD	4340	4.20	283.10	476	4336.89	33.05	33.05 N	122.28 W	126.67	285.13	0.28	0.2	3.3
9	MWD	4646	7.60	293.40	306	4641.23	43.63	43.63 N	151.78 W	157.92	286.04	1.16	1.1	3.4
10	MWD	4740	6.00	297.20	94	4734.56	48.35	48.35 N	161.85 W	168.92	286.63	1.77	-1.7	4.0
11	MWD	4834	4.00	293.00	94	4828.20	51.87	51.87 N	169.24 W	177.01	287.04	2.16	-2.1	-4.5
12	MWD	4928	3.70	294.80	94	4921.99	54.43	54.43 N	175.01 W	183.28	287.28	0.34	-0.3	1.9
13	MWD	5024	4.20	301.90	96	5017.76	57.58	57.58 N	180.81 W	189.75	287.67	0.73	0.5	7.4
14	MWD	5116	3.50	304.10	92	5109.55	60.94	60.94 N	185.99 W	195.72	288.14	0.78	-0.8	2.4
15	MWD	5209	3.70	310.50	93	5202.37	64.48	64.48 N	190.62 W	201.23	288.69	0.48	0.2	6.9
16	MWD	5302	3.60	317.00	93	5295.18	68.56	68.56 N	194.90 W	206.61	289.38	0.46	-0.1	7.0
17	MWD	5366	3.80	321.10	64	5359.05	71.68	71.68 N	197.60 W	210.20	289.94	0.52	0.3	6.4
18	MWD	5429	4.90	324.23	63	5421.87	75.49	75.49 N	200.48 W	214.23	290.63	1.79	1.7	5.0
19	MWD	5492	5.00	319.10	63	5484.63	79.75	79.75 N	203.85 W	218.90	291.37	0.72	0.2	-8.1
20	MWD	5554	5.00	317.30	62	5546.40	83.78	83.78 N	207.46 W	223.73	291.99	0.25	0.0	-2.9
21	MWD	5618	4.60	313.30	64	5610.17	87.59	87.59 N	211.21 W	228.65	292.52	0.81	-0.6	-6.3
22	MWD	5681	4.60	305.00	63	5672.97	90.77	90.77 N	215.12 W	233.49	292.88	1.06	0.0	-13.2
23	MWD	5742	3.80	290.90	61	5733.81	92.89	92.89 N	219.01 W	237.90	292.98	2.13	-1.3	-23.1
24	MWD	5805	3.40	279.90	63	5796.68	93.96	93.96 N	222.81 W	241.81	292.87	1.26	-0.6	-17.5
25	MWD	5868	4.10	283.50	63	5859.55	94.81	94.81 N	226.84 W	245.85	292.68	1.17	1.1	5.7



Company: Energy Operating
Field: Wildcat
Cty/Blk/Par: Costilla
Well Name: Williamson # 1
Rig: Cyclone Rig #4

Job Number: 106568
Magnetic Decl.: 10.33
Grid Corr.:
Total Survey Corr.: 10.33
Target Info:

Calculation Method Minimum Curvature
Proposed Azimuth 0
Depth Reference RKB
Tie Into: Surface Casing @ 912

No.	Tool Type	Survey Depth (ft)	Incl (°)	Azimuth (°)	Course Lgth (ft)	TVD (ft)	VS (ft)	Coordinates		Closure		DLS (°/100')	Bld Rate (°/100')	Wlk Rate (°/100')
								N/S (ft)	E/W (ft)	Dist (ft)	Ang (°)			
26	MWD	5931	3.50	280.70	63	5922.41	95.69	95.69 N	230.92 W	249.96	292.51	1.00	-1.0	-4.4
27	MWD	5994	3.70	284.90	63	5985.28	96.57	96.57 N	234.77 W	253.85	292.36	0.53	0.3	6.7
28	MWD	6057	3.00	301.90	63	6048.18	97.96	97.96 N	238.13 W	257.50	292.36	1.92	-1.1	27.0
29	MWD	6119	2.90	301.50	62	6110.10	99.64	99.64 N	240.85 W	260.64	292.47	0.16	-0.2	-0.6
30	MWD	6149	3.30	301.70	30	6140.05	100.49	100.49 N	242.23 W	262.25	292.53	1.33	1.3	0.7
31	MWD	6181	3.60	300.20	32	6171.99	101.48	101.48 N	243.88 W	264.15	292.59	0.98	0.9	-4.7
32	MWD	6241	3.90	303.30	60	6231.87	103.55	103.55 N	247.22 W	268.02	292.73	0.60	0.5	5.2
33	MWD	6303	2.90	310.40	62	6293.76	105.72	105.72 N	250.17 W	271.59	292.91	1.75	-1.6	11.5
34	MWD	6365	2.60	316.80	62	6355.68	107.76	107.76 N	252.33 W	274.38	293.13	0.69	-0.5	10.3
35	MWD	6428	2.30	323.10	63	6418.63	109.81	109.81 N	254.07 W	276.78	293.38	0.64	-0.5	10.0
36	MWD	6491	3.40	345.90	63	6481.55	112.64	112.64 N	255.28 W	279.03	293.81	2.47	1.7	36.2
37	MWD	6554	4.00	4.80	63	6544.42	116.64	116.64 N	255.55 W	280.91	294.53	2.14	1.0	-541.4
38	MWD	6615	4.00	18.00	61	6605.27	120.78	120.78 N	254.72 W	281.90	295.37	1.51	0.0	21.6



7424 W 6WN Road
Casper, Wyoming 82609
(307) 472-0001 Fax (307) 472-0161

INTEQ

Survey Certification Sheet

Energy Operating Company, Inc.

Company

106568

Job Number

June 24, 1999

Date

Sec.23-T1N-R72W

Lease

Williamson #1

Well Name

Costillo County, Colorado

County and State

Surveyed from a depth of 912 feet to 6,615 feet MD

Type of Survey MWD

Directional Supervisor/Surveyor Bob Richardson

The data and calculations for this survey have been checked by me and conform to the standards and procedures set forth by Baker Hughes INTEQ. This report represents a true and correct Directional Survey of this well based on the original data obtained at the well site. Wellbore Coordinates are calculated using minimum curvature.

Doug Hudson
District Engineer

This document has been subscribed and affirmed, or sworn to before me in the county of Natrona, state of Wyoming, this 27th day of July, 19 99.

My commission expires 4-6-02

Certification Number: 1331

Certification Date July 27, 1999





ENERGY OPERATING COMPANY, INC.

Structure : SEC.23-T1N-R72W

Well : WILLIAMSON #1

Field : COSTILLO COUNTY

Location : COLORADO

Created by doug

Date plotted : 30-Jun-99

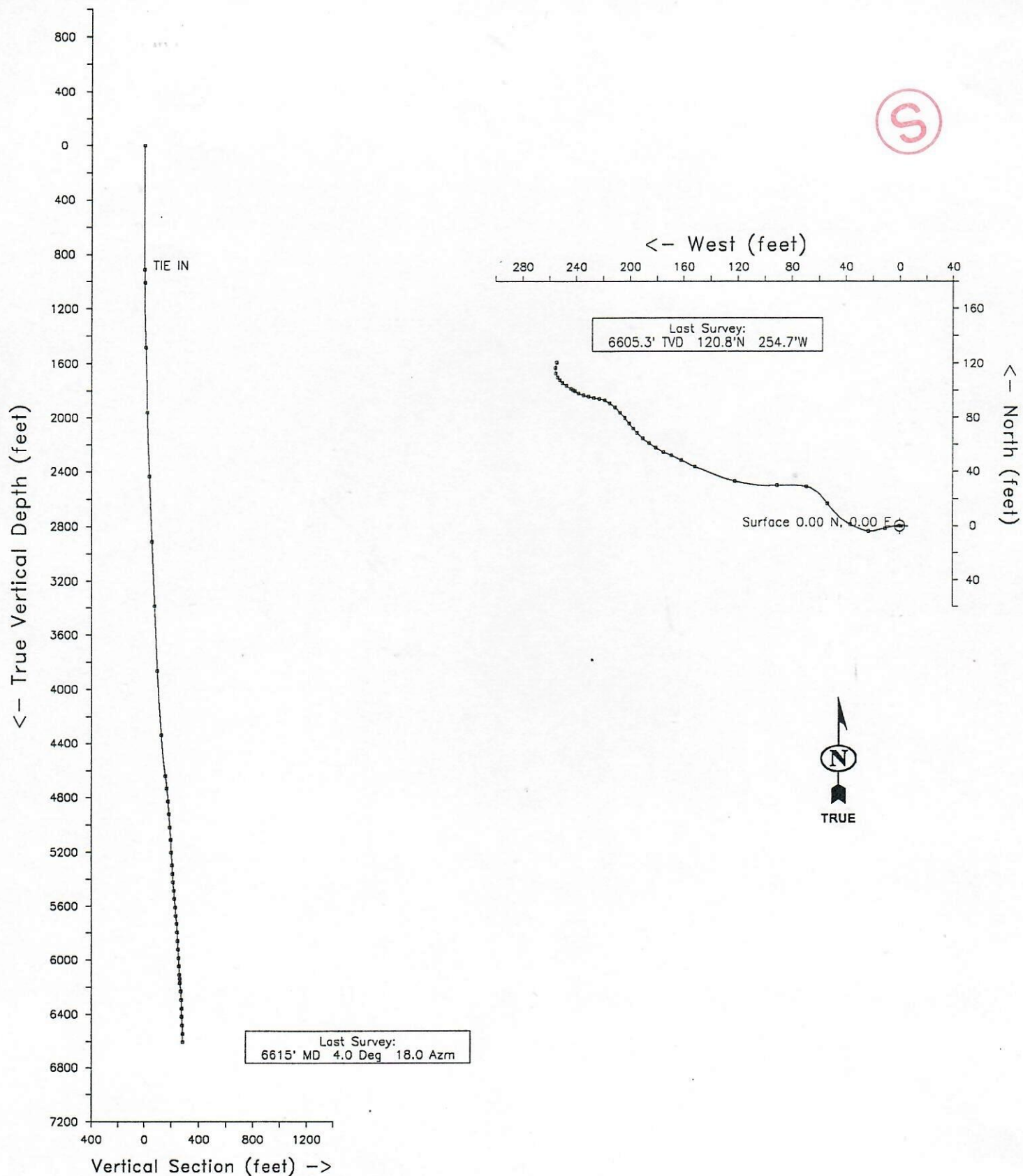
Plot Reference is WILLIAMSON #1.

Coordinates are in feet reference slot #1.

True Vertical Depths are reference rotary logs

--- Baker Hughes INTEQ ---

INTEQ



Azimuth 295.37 with reference 0.00 N, 0.00 E from slot #1

ENERGY OPERATING COMPANY, INC.
SEC.23-T1N-R72W

WILLIAMSON #1
slot #1
COSTILLO COUNTY
COLORADO

S U R V E Y L I S T I N G

by
Baker Hughes INTEQ

Your ref : WILLIAMSON #1
Our ref : svy4905
License :

Date printed : 28-Jun-99
Date created : 28-Jun-99
Last revised : 28-Jun-99

Slot local coordinates are 0.00 N 0.00 E

Projection type: mercator - UTM, Spheroid: Hayford

Reference North is True North

ENERGY OPERATING COMPANY, INC.
SEC.23-T1N-R72W,WILLIAMSON #1
COSTILLO COUNTY,COLORADO

SURVEY LISTING Page 1
Your ref : WILLIAMSON #1
Last revised : 28-Jun-99

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100ft	Vert Sect	
0.00	0.00	0.00	0.00	0.00	N	0.00	E	0.00
912.00	0.00	0.00	912.00	0.00	N	0.00	E	0.00
1008.00	0.50	281.20	1008.00	0.08	N	0.41	W	0.41
1484.00	2.10	254.70	1483.86	1.82	S	10.86	W	9.04
1960.00	1.00	273.30	1959.68	3.88	S	23.42	W	19.50
2436.00	2.50	297.50	2435.45	1.15	N	36.78	W	33.72
2912.00	3.20	324.00	2910.88	16.70	N	53.79	W	55.76
3388.00	1.90	280.90	3386.44	28.94	N	69.35	W	75.07
3864.00	3.40	267.30	3861.92	29.77	N	91.20	W	95.16
4340.00	4.20	283.10	4336.89	33.05	N	122.28	W	124.65
4646.00	7.60	293.40	4641.23	43.63	N	151.78	W	155.83
4740.00	6.00	297.20	4734.56	48.35	N	161.85	W	166.96
4834.00	4.00	293.00	4828.20	51.87	N	169.24	W	175.14
4928.00	3.70	294.80	4921.99	54.43	N	175.01	W	181.45
5024.00	4.20	301.90	5017.76	57.58	N	180.81	W	188.04
5116.00	3.50	304.10	5109.55	60.94	N	185.99	W	194.17
5209.00	3.70	310.50	5202.37	64.48	N	190.62	W	199.87
5302.00	3.60	317.00	5295.18	68.56	N	194.90	W	205.48
5366.00	3.80	321.10	5359.05	71.68	N	197.60	W	209.26
5429.00	4.90	324.23	5421.87	75.49	N	200.48	W	213.49
5492.00	5.00	319.10	5484.63	79.75	N	203.85	W	218.36
5554.00	5.00	317.30	5546.40	83.78	N	207.46	W	223.34
5618.00	4.60	313.30	5610.17	87.59	N	211.21	W	228.37
5681.00	4.60	305.00	5672.97	90.77	N	215.12	W	233.27
5742.00	3.80	290.90	5733.81	92.89	N	219.01	W	237.69

TIE IN

All data is in feet unless otherwise stated.
Coordinates from slot #1 and TVD from rotary table.
Bottom hole distance is 281.90 on azimuth 295.37 degrees from wellhead.
Vertical section is from wellhead on azimuth 295.37 degrees.
Calculation uses the minimum curvature method.
Presented by Baker Hughes INTEQ

ENERGY OPERATING COMPANY, INC.
SEC.23-T1N-R72W, WILLIAMSON #1
COSTILLO COUNTY, COLORADO

SURVEY LISTING Page 2
Your ref : WILLIAMSON #1
Last revised : 28-Jun-99

Measured Depth	Inclin. Degrees	Azimuth Degrees	True Vert Depth	R E C T A N G U L A R C O O R D I N A T E S		Dogleg Deg/100ft	Vert Sect
5805.00	3.40	279.90	5796.68	93.96 N	222.81 W	1.26	241.58
5868.00	4.10	283.50	5859.55	94.81 N	226.84 W	1.17	245.58
5931.00	3.50	280.70	5922.41	95.69 N	230.92 W	1.00	249.64
5994.00	3.70	284.90	5985.28	96.57 N	234.77 W	0.53	253.50
6057.00	3.00	301.90	6048.18	97.96 N	238.13 W	1.92	257.14
6119.00	2.90	301.50	6110.10	99.64 N	240.85 W	0.16	260.31
6149.00	3.30	301.70	6140.05	100.49 N	242.23 W	1.33	261.92
6181.00	3.60	300.20	6171.99	101.48 N	243.88 W	0.98	263.84
6241.00	3.90	303.30	6231.87	103.55 N	247.22 W	0.60	267.74
6303.00	2.90	310.40	6293.76	105.72 N	250.17 W	1.75	271.34
6365.00	2.60	316.80	6355.68	107.76 N	252.33 W	0.69	274.17
6428.00	2.30	323.10	6418.63	109.81 N	254.07 W	0.64	276.62
6491.00	3.40	345.90	6481.55	112.64 N	255.28 W	2.47	278.92
6554.00	4.00	4.80	6544.42	116.64 N	255.55 W	2.14	280.88
6615.00	4.00	18.00	6605.27	120.78 N	254.72 W	1.51	281.90

All data is in feet unless otherwise stated.
Coordinates from slot #1 and TVD from rotary table.
Bottom hole distance is 281.90 on azimuth 295.37 degrees from wellhead.
Vertical section is from wellhead on azimuth 295.37 degrees.
Calculation uses the minimum curvature method.
Presented by Baker Hughes INTEQ

ENERGY OPERATING COMPANY, INC.
SEC.23-T1N-R72W,WILLIAMSON #1
COSTILLO COUNTY,COLORADO

SURVEY LISTING Page 3
Your ref : WILLIAMSON #1
Last revised : 28-Jun-99

				Comments in wellpath
				=====
MD	TVD	Rectangular Coords.		Comment
912.00	912.00	0.00 N	0.00 E	TIE IN

NO PROPOSAL