



Client: Energen Resources Corp
API #: 30-045-34998
Well Name: Federal 29-9-28 #5
Location: Sec 28-T29N-R9W
Job Number: 1105

Start Date: 6-Jul-11
End Date: 10-Jul-11
Well Type: S-Well

Plan Number: 2

DIRECTIONAL DRILLING REPORT

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Surveys
Well Plot
EOW Report
Bottom Hole Assemblies
Daily Tower Report
Slide Sheets
Cost Summary



END OF WELL REPORT



Client: Energen Resources Corp
Well Name: Federal 29-9-28 #5
Location: Sec 28-T29N-R9W
Job Number: 1105
Start Date: 6-Jul-11 **End Date:** 10-Jul-11

PERSONAL

Operator Personnel
Company Man:
 John Thompson
Geologist:

Directional Personnel
 Peter Leskosek
 David Westbrook

Survey Personnel
 Ron Alexis

WELL SUMMARY

KOP: 191	TD: 2525	FEET DRLG.: 2334	TOTAL DRLG. HRS.: 29.5	AVG. ROP:
# DAYS: 5	# BITS: 2	# BHA'S: 2	NO. OF MOTORS: 2	79.1

Well Parameters

INTERMEDIATE CASING	TOTAL DEPTH	
	LEG 1	LEG 2
HOLE SIZE: 7 7/8 WHIPSTOCK SETTING: Coordinates: MD: 2525 TVD: 2351.44 INC: 9.3 DIRECTION: 288.3 VERTICAL SECTION: 770.93 N / S: 245.28 E / W: -730.89	HOLE SIZE: Coordinates: MD: TVD: INC: DIRECTION: VERTICAL SECTION: N / S: E / W:	HOLE SIZE: N/A Coordinates: MD: TVD: INC: DIRECTION: VERTICAL SECTION: N / S: E / W:

RE-ENTRY DATA: N/A

TOP OF WINDOW:
BOTTOM OF WINDOW:

DIRECTION:
RAT HOLE:

DIRECTIONAL COMMENTS

BHA 1 - Drilled 1231 ft in 13 75 hrs - 89.5 ft/hr

Bit - Reed E1100 with 6"16's jets. Motor is a National 6 1/4", 7/8 lobe, 4.8 stage, 0.32 rev/gal

BHA 1 - Drilled 1051 ft in hrs - 67 ft/hr

Bit - Reed E1046 with 6"12's jets. Motor is a National 6 1/4", 7/8 lobe, 4.8 stage, 0.32 rev/gal

Actual well bore is 0' above/below and 5.3' Left of proposed wellbore at at TVD of 2350'

RECOMMENDATIONS

Mix nutplug and cedar fiber for sliding when bit balls up.

Need to get bit breaker for rig to make up and break out bit.

Circulate fluid through motor while tripping to keep from packing of and rinse with fresh water before surface.

REPORT PREPARED BY:

Peter Leskosek

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
1709.00	24.80	287.90	1560.59	183.25	-551.51	581.13	581.15	288.38	5.10
1740.00	23.30	287.30	1588.90	187.08	-563.55	593.76	593.79	288.36	4.90
1772.00	22.30	287.80	1618.40	190.81	-575.37	606.15	606.19	288.35	3.18
1804.00	20.60	287.50	1648.18	194.36	-586.52	617.85	617.89	288.33	5.32
1835.00	19.30	287.90	1677.32	197.58	-596.60	628.43	628.46	288.32	4.22
1866.00	18.40	288.60	1706.66	200.71	-606.11	638.44	638.48	288.32	2.99
1897.00	17.40	290.90	1736.16	203.93	-615.08	647.97	648.00	288.34	3.95
1928.00	16.60	290.40	1765.80	207.12	-623.56	657.03	657.06	288.37	2.62
1958.00	15.60	289.60	1794.63	209.97	-631.37	665.34	665.37	288.40	3.41
1989.00	14.50	290.40	1824.56	212.72	-638.94	673.39	673.42	288.41	3.61
2021.00	13.50	292.50	1855.61	215.55	-646.15	681.13	681.15	288.45	3.50
2053.00	12.50	295.70	1886.79	218.48	-652.72	688.29	688.31	288.51	3.85
2084.00	11.80	292.60	1917.10	221.15	-658.67	694.79	694.80	288.56	3.09
2116.00	11.00	288.10	1948.47	223.36	-664.59	701.11	701.12	288.58	3.74
2147.00	10.40	284.70	1978.93	224.99	-670.11	706.85	706.87	288.56	2.81
2179.00	9.70	283.90	2010.44	226.37	-675.52	712.42	712.44	288.53	2.23
2210.00	9.50	283.40	2041.00	227.59	-680.54	717.57	717.59	288.49	.70
2242.00	9.70	287.90	2072.56	229.03	-685.68	722.89	722.91	288.47	2.43
2273.00	9.90	293.20	2103.10	230.88	-690.61	728.16	728.18	288.49	2.98
2304.00	10.00	293.40	2133.64	233.00	-695.53	733.50	733.52	288.52	.34
2335.00	10.10	291.80	2164.16	235.08	-700.52	738.90	738.91	288.55	.96
2367.00	10.00	289.60	2195.67	237.05	-705.75	744.48	744.49	288.57	1.24
2399.00	9.90	288.00	2227.19	238.83	-710.98	750.01	750.02	288.57	.92
2430.00	9.90	286.80	2257.73	240.43	-716.07	755.34	755.35	288.56	.67
2461.00	9.50	288.60	2288.28	242.01	-721.04	760.56	760.57	288.55	1.62
2480.00	9.30	288.30	2307.03	243.00	-723.98	763.66	763.68	288.55	1.08
Projection to Bit									
2525.00	9.30	288.30	2351.44	245.28	-730.89	770.93	770.95	288.55	.00

Job Number: 1105
 Company: Energen Resources
 Lease/Well: Federal 28-8-28 #5
 Location: Sec 28, T29N, R9W
 Rig Name: CBM
 RKB: 5761
 G.L. or M.S.L.:

State/Country: New Mexico, USA
 Declination: 9.89
 Grid:
 File name: C:\WINSERVE\1105.SVY
 Date/Time: 10-Jul-11 / 09:30
 Curve Name: Survey

WINSERVE SURVEY CALCULATIONS
 Minimum Curvature Method
 Vertical Section Plane 288.93
 Vertical Section Referenced to Wellhead
 Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	Direction Deg	Dogleg Severity Deg/100
191.00	.00	.00	191.00	.00	.00	.00	.00	.00	.00
227.00	1.10	299.40	227.00	.17	-.30	.34	.35	299.40	3.06
259.00	2.20	307.80	258.98	.70	-1.05	1.22	1.26	303.47	3.51
291.00	3.50	299.90	290.94	1.56	-2.39	2.76	2.85	303.18	4.23
323.00	4.50	296.10	322.87	2.60	-4.36	4.97	5.08	300.80	3.23
354.00	5.30	293.10	353.75	3.70	-6.77	7.60	7.71	298.64	2.71
385.00	5.80	288.90	384.61	4.77	-9.57	10.60	10.69	296.48	2.08
417.00	7.20	288.10	416.40	5.91	-13.00	14.22	14.29	294.45	4.38
448.00	8.30	286.60	447.12	7.16	-17.00	18.40	18.44	292.83	3.61
480.00	9.10	287.60	478.75	8.58	-21.62	23.23	23.26	291.65	2.54
511.00	10.60	288.80	509.29	10.24	-26.66	28.54	28.56	291.01	4.88
543.00	11.50	291.80	540.70	12.37	-32.41	34.67	34.69	290.90	3.34
574.00	12.60	289.00	571.01	14.62	-38.47	41.13	41.16	290.81	4.02
606.00	14.10	289.00	602.15	17.03	-45.46	48.52	48.54	290.53	4.69

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE		Dogleg Severity Deg/100
							Distance FT	Direction Deg	
638.00	15.30	290.10	633.10	19.75	-53.11	56.64	56.66	290.40	3.85
669.00	16.80	290.70	662.89	22.74	-61.14	65.21	65.23	290.40	4.87
701.00	18.30	290.60	693.40	26.14	-70.17	74.85	74.88	290.43	4.69
733.00	19.90	290.40	723.64	29.81	-79.98	85.32	85.35	290.44	5.00
764.00	20.70	289.50	752.71	33.47	-90.09	96.07	96.10	290.38	2.77
796.00	21.50	289.30	782.57	37.30	-100.95	107.59	107.62	290.28	2.51
827.00	22.90	288.50	811.27	41.09	-112.03	119.31	119.33	290.14	4.62
859.00	23.90	287.00	840.64	44.96	-124.14	132.01	132.03	289.91	3.64
891.00	25.80	287.50	869.67	48.95	-136.98	145.45	145.46	289.67	5.97
922.00	27.50	286.80	897.38	53.05	-150.27	159.35	159.36	289.44	5.58
954.00	29.10	287.60	925.55	57.54	-164.76	174.51	174.52	289.25	5.14
986.00	30.30	287.70	953.35	62.34	-179.87	190.36	190.36	289.12	3.75
1017.00	32.10	287.80	979.86	67.24	-195.16	206.42	206.42	289.01	5.81
1049.00	32.90	287.60	1006.85	72.47	-211.54	223.61	223.61	288.91	2.52
1080.00	33.70	287.30	1032.76	77.57	-227.77	240.62	240.62	288.81	2.63
1112.00	33.90	287.30	1059.35	82.86	-244.77	258.42	258.42	288.70	.62
1143.00	35.00	288.50	1084.92	88.26	-261.46	275.95	275.95	288.65	4.17
1175.00	35.20	288.50	1111.10	94.10	-278.91	294.35	294.35	288.64	.62
1206.00	35.10	288.10	1136.44	99.70	-295.85	312.19	312.20	288.62	.81
1238.00	35.10	287.90	1162.62	105.39	-313.35	330.59	330.60	288.59	.36
1270.00	34.70	287.60	1188.87	110.97	-330.79	348.90	348.90	288.54	1.36
1301.00	34.40	287.20	1214.40	116.22	-347.56	366.47	366.48	288.49	1.21
1332.00	35.00	287.20	1239.89	121.44	-364.42	384.11	384.12	288.43	1.94
1364.00	35.20	287.20	1266.07	126.88	-382.00	402.50	402.52	288.37	.63
1395.00	34.70	286.20	1291.48	131.99	-399.01	420.25	420.27	288.30	2.45
1427.00	34.70	288.30	1317.79	137.39	-416.40	438.45	438.48	288.26	3.74
1459.00	34.50	288.20	1344.13	143.08	-433.66	456.62	456.65	288.26	.65
1490.00	33.50	289.10	1369.83	148.62	-450.08	473.96	473.99	288.27	3.61
1522.00	31.90	288.70	1396.76	154.22	-466.44	491.24	491.27	288.30	5.05
1553.00	31.00	287.90	1423.20	159.30	-481.79	507.42	507.45	288.30	3.20
1585.00	29.90	287.80	1450.79	164.27	-497.23	523.63	523.66	288.28	3.44
1615.00	29.40	289.50	1476.86	169.02	-511.29	538.47	538.50	288.29	3.26
1646.00	27.70	290.10	1504.09	174.03	-525.23	553.28	553.31	288.33	5.56
1678.00	26.20	289.60	1532.61	178.96	-538.87	567.78	567.81	288.37	4.74