

 MURCHISON OIL & GAS, INC.

30-015-40045

Murchison Oil and Gas

Paddock

Quail State Com 3H

Quail State Com 3H

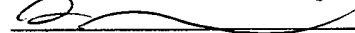
Quail State Com 3H

Survey: Quail State Com 3H

MOJO End of Well Survey

31 August, 2012

This survey is correct to the best of my knowledge and is supported by actual field data.



(Signature)

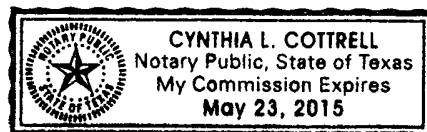
Notarized this date 6th of September, 2012.



Notary Signature

County of Collin

State of Texas



MOJO
DIRECTIONAL CORPORATION

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well Quail State Com 3H
Project:	Paddock	TVD Reference:	WELL @ 3565.5usft (HWD 4)
Site:	Quail State Com 3H	MD Reference:	WELL @ 3565 5usft (HWD 4)
Well:	Quail State Com 3H	North Reference:	Grid
Wellbore:	Quail State Com 3H	Survey Calculation Method:	Minimum Curvature
Design:	Quail State Com 3H	Database:	EDM 5000.1 Single User Db

Project	Paddock, Horizontal Development Wells		
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Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site	Quail State Com 3H		
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Site Position:		Northing:	670,734.84 usft	Latitude:	32° 50' 37.655 N
From:	Lat/Long	Easting:	585,311.70 usft	Longitude:	104° 11' 24.536 W
Position Uncertainty:	1.0 usft	Slot Radius:	15 "	Grid Convergence:	0.08 °

Well	Quail State Com 3H				
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Well Position	+N/-S	0.0 usft	Northing:	670,734.84 usft	Latitude:	32° 50' 37.655 N
	+E/-W	0.0 usft	Easting:	585,311.70 usft	Longitude:	104° 11' 24.536 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,553.5 usft

Wellbore	Quail State Com 3H				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	13/03/2012	7 82	60.66	48,884

Design	Quail State Com 3H				
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Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	264.35	

Survey Program	Date 30/08/2012				
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From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
403.0	7,896.0	Quail State Com 3H (Quail State Com 3H)	MWD	MWD - Standard

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Well:	Quail State Com 3H	North Reference:	Grid
Wellbore:	Quail State Com 3H	Survey Calculation Method:	Minimum Curvature
Design:	Quail State Com 3H	Database:	EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	DLeg (°/100usft)	Closure Azimuth (°)	
0.0	0.00	0.00	0.0	3,565.5	0.0	0.0	670,734.84	585,311.70	0.00	0.00	
377.0	0.28	199.70	377.0	3,188.5	-0.9	-0.3	670,733.97	585,311.39	0.07	199.70	
9 5/8" Surface Casing											
403.0	0.30	199.70	403.0	3,162.5	-1.0	-0.4	670,733.84	585,311.35	0.07	199.70	
434.0	1.00	248.50	434.0	3,131.5	-1.2	-0.6	670,733.67	585,311.07	2.69	208.50	
465.0	0.30	238.50	465.0	3,100.5	-1.3	-1.0	670,733.53	585,310.75	2.28	216.10	
495.0	0.30	244.80	495.0	3,070.5	-1.4	-1.1	670,733.45	585,310.61	0.11	218.30	
526.0	0.40	274.10	526.0	3,039.5	-1.4	-1.3	670,733.42	585,310.43	0.65	222.09	
559.0	0.70	211.20	559.0	3,006.5	-1.6	-1.5	670,733.26	585,310.21	1.90	223.48	
590.0	1.00	239.40	590.0	2,975.5	-1.9	-1.8	670,732.96	585,309.88	1.63	224.22	
621.0	0.70	268.70	621.0	2,944.5	-2.0	-2.2	670,732.82	585,309.45	1.67	228.08	
652.0	1.00	213.80	652.0	2,913.5	-2.2	-2.6	670,732.59	585,309.11	2.67	229.03	
683.0	1.10	228.20	683.0	2,882.5	-2.7	-3.0	670,732.17	585,308.74	0.91	227.95	
713.0	0.90	233.80	713.0	2,852.5	-3.0	-3.4	670,731.84	585,308.34	0.74	228.27	
760.0	0.70	202.00	760.0	2,805.5	-3.5	-3.8	670,731.35	585,307.93	1.02	227.25	
804.0	0.70	267.70	804.0	2,761.5	-3.7	-4.1	670,731.09	585,307.56	1.73	227.86	
847.0	0.80	268.90	847.0	2,718.5	-3.8	-4.7	670,731.08	585,307.00	0.24	231.34	
890.0	0.70	206.60	890.0	2,675.5	-4.0	-5.1	670,730.83	585,306.58	1.82	231.98	
933.0	0.70	272.80	933.0	2,632.5	-4.2	-5.5	670,730.61	585,306.20	1.78	232.47	
976.0	0.90	225.40	976.0	2,589.5	-4.4	-6.0	670,730.39	585,305.70	1.56	233.46	
1,019.0	0.80	221.90	1,018.9	2,546.6	-4.9	-6.4	670,729.93	585,305.26	0.26	232.70	
1,062.0	0.80	262.30	1,061.9	2,503.6	-5.2	-6.9	670,729.66	585,304.76	1.28	233.31	
1,105.0	0.70	285.90	1,104.9	2,460.6	-5.1	-7.5	670,729.70	585,304.21	0.75	235.54	
1,147.0	0.70	263.00	1,146.9	2,418.6	-5.1	-8.0	670,729.74	585,303.71	0.66	237.45	
1,190.0	0.40	357.50	1,189.9	2,375.6	-5.0	-8.3	670,729.85	585,303.44	1.94	238.89	
1,234.0	0.40	236.30	1,233.9	2,331.6	-4.9	-8.4	670,729.92	585,303.31	1.58	239.65	
1,277.0	0.20	80.80	1,276.9	2,288.6	-5.0	-8.4	670,729.85	585,303.26	1.37	239.44	

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Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	DLeg (°/100usft)	Closure Azimuth (°)
1,320.0	0.20	84.50	1,319.9	2,245.6	-5.0	-8.3	670,729.87	585,303.41	0.03	239.09
1,363.0	0.20	59.00	1,362.9	2,202.6	-4.9	-8.2	670,729.91	585,303.54	0.21	238.89
1,406.0	0.40	24.20	1,405.9	2,159.6	-4.7	-8.0	670,730.09	585,303.67	0.61	239.42
1,449.0	0.60	340.70	1,448.9	2,116.6	-4.4	-8.0	670,730.44	585,303.66	0.96	241.34
1,492.0	0.30	239.80	1,491.9	2,073.6	-4.2	-8.2	670,730.60	585,303.49	1.67	242.70
1,535.0	0.70	320.20	1,534.9	2,030.6	-4.1	-8.5	670,730.74	585,303.22	1.66	244.22
1,578.0	0.70	340.90	1,577.9	1,987.6	-3.6	-8.7	670,731.19	585,302.97	0.58	247.35
1,621.0	0.10	194.90	1,620.9	1,944.6	-3.4	-8.8	670,731.40	585,302.87	1.83	248.75
1,663.0	0.70	312.70	1,662.9	1,902.6	-3.3	-9.0	670,731.54	585,302.67	1.79	249.95
1,706.0	0.50	27.40	1,705.9	1,859.6	-3.0	-9.1	670,731.89	585,302.57	1.73	252.10
1,749.0	0.10	224.70	1,748.9	1,816.6	-2.8	-9.1	670,732.03	585,302.63	1.39	252.79
1,793.0	0.30	247.50	1,792.9	1,772.6	-2.9	-9.2	670,731.95	585,302.49	0.48	252.62
1,836.0	0.60	280.60	1,835.9	1,729.6	-2.9	-9.5	670,731.95	585,302.17	0.90	253.17
1,879.0	0.40	261.80	1,878.9	1,686.6	-2.9	-9.9	670,731.97	585,301.80	0.60	253.87
1,922.0	0.60	351.10	1,921.9	1,643.6	-2.7	-10.1	670,732.17	585,301.61	1.67	255.21
1,965.0	0.60	291.90	1,964.9	1,600.6	-2.4	-10.3	670,732.48	585,301.37	1.38	257.15
2,007.0	0.30	228.30	2,006.9	1,558.6	-2.3	-10.6	670,732.49	585,301.08	1.28	257.53
2,050.0	0.60	288.30	2,049.9	1,515.6	-2.4	-10.9	670,732.48	585,300.79	1.21	257.84
2,093.0	0.30	220.60	2,092.9	1,472.6	-2.4	-11.2	670,732.47	585,300.50	1.30	258.07
2,136.0	0.30	47.60	2,135.9	1,429.6	-2.4	-11.2	670,732.46	585,300.51	1.39	258.02
2,179.0	0.60	272.60	2,178.9	1,386.6	-2.3	-11.3	670,732.55	585,300.37	1.95	258.58
2,222.0	0.30	98.10	2,221.9	1,343.6	-2.3	-11.4	670,732.54	585,300.25	2.09	258.66
2,265.0	0.40	224.90	2,264.9	1,300.6	-2.4	-11.4	670,732.42	585,300.26	1.46	258.07
2,308.0	0.30	100.40	2,307.9	1,257.6	-2.5	-11.4	670,732.29	585,300.26	1.44	257.46
2,351.0	0.60	274.20	2,350.9	1,214.6	-2.5	-11.6	670,732.29	585,300.15	2.09	257.56
2,395.0	0.60	261.00	2,394.9	1,170.6	-2.6	-12.0	670,732.27	585,299.69	0.31	257.93
2,438.0	0.50	254.30	2,437.9	1,127.6	-2.7	-12.4	670,732.18	585,299.29	0.28	257.93

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Well:	Quail State Com 3H	North Reference:	Gnd
Wellbore:	Quail State Com 3H	Survey Calculation Method:	Minimum Curvature
Design:	Quail State Com 3H	Database:	EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	DLeg (°/100usft)	Closure Azimuth (°)	
2,481.0	0.40	334.60	2,480.9	1,084.6	-2.6	-12.7	670,732.27	585,299.05	1.36	258.53	
2,524.0	0.40	223.50	2,523.9	1,041.6	-2.5	-12.8	670,732.29	585,298.88	1.53	258.79	
2,567.0	0.40	212.00	2,566.9	998.6	-2.8	-13.0	670,732.06	585,298.70	0.19	257.94	
2,610.0	0.40	34.10	2,609.9	955.6	-2.8	-13.0	670,732.06	585,298.70	1.86	257.93	
2,653.0	0.40	251.30	2,652.9	912.6	-2.7	-13.1	670,732.13	585,298.64	1.76	258.30	
2,695.0	0.40	111.30	2,694.9	870.6	-2.8	-13.1	670,732.03	585,298.64	1.79	257.88	
2,739.0	0.50	298.60	2,738.9	826.6	-2.8	-13.1	670,732.07	585,298.61	2.04	258.05	
2,782.0	0.30	241.40	2,781.9	783.6	-2.7	-13.4	670,732.10	585,298.35	0.98	258.43	
2,824.0	3.20	271.30	2,823.9	741.6	-2.8	-14.6	670,732.08	585,297.08	7.01	259.31	
2,867.0	6.10	276.30	2,866.7	698.8	-2.5	-18.1	670,732.36	585,293.61	6.80	262.19	
2,910.0	10.10	276.30	2,909.3	656.2	-1.8	-24.1	670,733.02	585,287.59	9.30	265.69	
2,953.0	13.60	273.30	2,951.4	614.1	-1.1	-32.9	670,733.73	585,278.79	8.26	268.07	
2,996.0	17.70	267.70	2,992.8	572.7	-1.1	-44.5	670,733.75	585,267.21	10.15	268.61	
3,039.0	21.20	266.20	3,033.3	532.2	-1.9	-58.8	670,732.98	585,252.92	8.22	268.19	
3,082.0	24.30	269.80	3,073.0	492.5	-2.4	-75.4	670,732.43	585,236.31	7.90	268.17	
3,125.0	28.00	269.80	3,111.6	453.9	-2.5	-94.3	670,732.36	585,217.36	8.60	268.50	
3,168.0	31.50	268.90	3,148.9	416.6	-2.7	-115.7	670,732.11	585,196.03	8.21	268.65	
3,211.0	36.20	267.40	3,184.6	380.9	-3.5	-139.6	670,731.32	585,172.10	11.10	268.56	
3,254.0	39.30	265.90	3,218.6	346.9	-5.1	-165.9	670,729.77	585,145.83	7.52	268.25	
3,297.0	42.20	264.80	3,251.2	314.3	-7.3	-193.9	670,727.49	585,117.86	6.95	267.83	
3,336.9	44.98	263.40	3,280.0	285.5	-10.2	-221.2	670,724.65	585,090.50	7.38	267.36	
Quail State Com 3H Paddock Intersection											
3,340.0	45.20	263.30	3,282.2	283.3	-10.4	-223.4	670,724.40	585,088.32	7.38	267.32	
3,346.0	45.79	263.42	3,286.4	279.1	-10.9	-227.6	670,723.90	585,084.07	9.86	267.25	
Glorietta											
3,383.0	49.40	264.10	3,311.4	254.1	-13.9	-254.8	670,720.94	585,056.92	9.86	266.88	

Company:

Murchison Oil and Gas

Project:

Paddock

Site:

Quail State Com 3H

Well:

Quail State Com 3H

Wellbore:

Quail State Com 3H

Design:

Quail State Com 3H

Local Co-ordinate Reference:

Well Quail State Com 3H

TVD Reference:

WELL @ 3565.5usft (HWD 4)

MD Reference:

WELL @ 3565.5usft (HWD 4)

North Reference:

Grid

Survey Calculation Method:

Minimum Curvature

Database:

EDM 5000.1 Single User Db

Survey

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	DLeg (°/100usft)	Closure Azimuth (°)
3,404.0	50.83	264.24	3,324.9	240.6	-15.5	-270.8	670,719.30	585,040.89	6.85	266.72
Paddock										
3,465.0	55.00	264.60	3,361.6	203.9	-20.3	-319.3	670,714.57	584,992.48	6.85	266.37
3,504.0	56.40	262.90	3,383.6	181.9	-23.8	-351.3	670,711.06	584,960.46	5.08	266.13
3,547.0	60.80	262.50	3,406.0	159.5	-28.4	-387.7	670,706.40	584,924.06	10.26	265.80
3,590.0	64.90	261.90	3,425.6	139.9	-33.6	-425.6	670,701.20	584,886.17	9.62	265.48
3,633.0	67.80	261.60	3,442.9	122.6	-39.3	-464.5	670,695.55	584,847.19	6.77	265.17
3,676.0	71.40	262.00	3,457.9	107.6	-45.0	-504.4	670,689.81	584,807.31	8.42	264.90
3,719.0	74.70	263.70	3,470.4	95.1	-50.1	-545.2	670,684.69	584,766.51	8.56	264.75
3,762.0	79.80	264.40	3,479.9	85.6	-54.5	-586.9	670,680.35	584,724.81	11.97	264.70
3,805.0	85.30	264.70	3,485.5	80.0	-58.5	-629.4	670,676.30	584,682.39	12.81	264.69
3,848.0	86.90	264.70	3,488.4	77.1	-62.5	-672.1	670,672.34	584,639.68	3.72	264.69
3,891.0	86.90	264.20	3,490.7	74.8	-66.7	-714.8	670,668.19	584,596.95	1.16	264.67
3,934.0	88.20	264.00	3,492.5	73.0	-71.1	-757.6	670,663.77	584,554.22	3.06	264.64
3,977.0	90.10	263.70	3,493.2	72.3	-75.7	-800.3	670,659.17	584,511.48	4.47	264.60
4,019.0	90.60	263.70	3,492.9	72.6	-80.3	-842.0	670,654.56	584,469.73	1.19	264.55
4,062.0	90.50	263.10	3,492.5	73.0	-85.2	-884.8	670,649.62	584,427.03	1.41	264.50
4,105.0	91.00	263.10	3,491.9	73.6	-90.4	-927.4	670,644.45	584,384.34	1.16	264.43
4,148.0	91.00	263.10	3,491.2	74.3	-95.6	-970.1	670,639.29	584,341.67	0.00	264.37
4,191.0	90.20	264.10	3,490.7	74.8	-100.3	-1,012.9	670,634.50	584,298.94	2.98	264.34
4,234.0	90.50	264.00	3,490.5	75.0	-104.8	-1,055.6	670,630.04	584,256.18	0.74	264.33
4,277.0	90.20	264.20	3,490.2	75.3	-109.2	-1,098.4	670,625.62	584,213.41	0.84	264.32
4,320.0	89.80	265.20	3,490.2	75.3	-113.2	-1,141.2	670,621.65	584,170.60	2.50	264.34
4,363.0	90.70	265.20	3,490.0	75.5	-116.8	-1,184.1	670,618.05	584,127.75	2.09	264.37
4,406.0	91.70	265.00	3,489.1	76.4	-120.5	-1,226.9	670,614.38	584,084.92	2.37	264.39
4,449.0	91.80	265.10	3,487.8	77.7	-124.2	-1,269.7	670,610.67	584,042.11	0.33	264.41
4,492.0	90.20	265.80	3,487.1	78.4	-127.6	-1,312.6	670,607.26	583,999.26	4.06	264.45

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Design:	Quail State Com 3H	Database:	EDM 5000 1 Single User Db

MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	DLeg (°/100usft)	Closure/Azimuth (°)
4,535.0	91.00	265.80	3,486.6	78.9	-130.7	-1,355.4	670,604.11	583,956.38	1.86	264.49
4,578.0	90.90	265.70	3,485.9	79.6	-133.9	-1,398.3	670,600.93	583,913.51	0.33	264.53
4,621.0	90.70	265.80	3,485.3	80.2	-137.1	-1,441.2	670,597.74	583,870.63	0.52	264.57
4,663.0	90.70	266.00	3,484.8	80.7	-140.1	-1,483.1	670,594.74	583,828.75	0.48	264.60
4,706.0	90.90	266.20	3,484.2	81.3	-143.0	-1,526.0	670,591.81	583,785.85	0.66	264.65
4,749.0	91.80	266.00	3,483.3	82.2	-146.0	-1,568.9	670,588.89	583,742.97	1.69	264.68
4,792.0	92.50	265.40	3,481.7	83.8	-149.2	-1,611.7	670,585.67	583,700.12	2.51	264.71
4,835.0	92.60	265.20	3,479.8	85.7	-152.7	-1,654.5	670,582.15	583,657.31	0.52	264.73
4,878.0	91.50	264.70	3,478.3	87.2	-156.5	-1,697.3	670,578.37	583,614.51	2.81	264.73
4,921.0	91.40	264.40	3,477.2	88.3	-160.6	-1,740.1	670,574.28	583,571.72	0.74	264.73
4,964.0	92.00	264.50	3,475.9	89.6	-164.7	-1,782.9	670,570.13	583,528.95	1.41	264.72
5,007.0	92.10	264.30	3,474.4	91.1	-168.9	-1,825.7	670,565.93	583,486.18	0.52	264.71
5,050.0	91.80	263.80	3,472.9	92.6	-173.4	-1,868.4	670,561.48	583,443.44	1.36	264.70
5,093.0	91.90	263.90	3,471.5	94.0	-178.0	-1,911.2	670,556.88	583,400.72	0.33	264.68
5,136.0	91.80	263.50	3,470.1	95.4	-182.7	-1,953.9	670,552.16	583,358.00	0.96	264.66
5,178.0	91.70	263.00	3,468.8	96.7	-187.6	-1,995.6	670,547.23	583,316.32	1.21	264.63
5,221.0	91.50	262.70	3,467.6	97.9	-193.0	-2,038.2	670,541.88	583,273.67	0.84	264.59
5,264.0	91.60	262.50	3,466.5	99.0	-198.5	-2,080.8	670,536.34	583,231.05	0.52	264.55
5,307.0	91.90	262.40	3,465.2	100.3	-204.2	-2,123.4	670,530.69	583,188.45	0.74	264.51
5,350.0	92.00	262.50	3,463.7	101.8	-209.8	-2,166.0	670,525.05	583,145.85	0.33	264.47
5,393.0	91.80	263.60	3,462.3	103.2	-215.0	-2,208.7	670,519.85	583,103.19	2.60	264.44
5,436.0	92.20	263.40	3,460.8	104.7	-219.9	-2,251.4	670,514.98	583,060.50	1.04	264.42
5,479.0	92.40	263.60	3,459.0	106.5	-224.7	-2,294.1	670,510.12	583,017.81	0.66	264.40
5,522.0	90.50	264.10	3,458.0	107.5	-229.3	-2,336.8	670,505.52	582,975.08	4.57	264.39
5,565.0	91.20	264.40	3,457.3	108.2	-233.6	-2,379.6	670,501.21	582,932.30	1.77	264.39
5,608.0	91.80	264.60	3,456.2	109.3	-237.8	-2,422.4	670,497.09	582,889.52	1.47	264.39
5,651.0	92.60	264.70	3,454.5	111.0	-241.8	-2,465.2	670,493.08	582,846.74	1.87	264.40

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well Quail State Com 3H
Project:	Paddock	TVD Reference:	WELL @ 3565 5usft (HWD 4)
Site:	Quail State Com 3H	MD Reference:	WELL @ 3565 5usft (HWD 4)
Well:	Quail State Com 3H	North Reference:	Grid
Wellbore:	Quail State Com 3H	Survey Calculation Method:	Minimum Curvature
Design:	Quail State Com 3H	Database:	EDM 5000.1 Single User Db

Survey										
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	DLeg (°/100usft)	Closure Azimuth (°)
5,694.0	91.80	264.50	3,452.9	112.6	-245.8	-2,508.0	670,489.04	582,803.97	1.92	264.40
5,737.0	90.00	265.10	3,452.2	113.3	-249.7	-2,550.8	670,485.14	582,761.16	4.41	264.41
5,779.0	90 10	264 70	3,452.2	113.3	-253.4	-2,592.6	670,481.41	582,719 33	0.98	264.42
5,823.0	91.00	264.50	3,451.8	113.7	-257.6	-2,636.4	670,477.27	582,675.53	2.10	264.42
5,866.0	91.30	264.00	3,450.9	114.6	-261.9	-2,679.2	670,472.96	582,632.76	1.36	264.42
5,909.0	91.10	263.60	3,450.0	115.5	-266.5	-2,721.9	670,468.32	582,590.02	1.04	264.41
5,952.0	90.80	263.10	3,449.3	116.2	-271.5	-2,764.6	670,463.34	582,547.32	1.36	264.39
5,995.0	90.60	262.50	3,448 8	116.7	-276.9	-2,807.3	670,457.95	582,504 67	1 47	264.37
6,038.0	90.20	262.40	3,448.5	117.0	-282.6	-2,849.9	670,452.31	582,462.05	0.96	264.34
6,081.0	90.50	262.70	3,448.2	117.3	-288.1	-2,892.5	670,446.73	582,419.42	0.99	264.31
6,124.0	90.70	262.60	3,447.7	117.8	-293.6	-2,935.2	670,441.23	582,376.77	0.52	264.29
6,167.0	90.50	262.70	3,447.3	118.2	-299.1	-2,977.8	670,435.73	582,334.13	0.52	264.26
6,210.0	90.90	262.40	3,446.8	118.7	-304 7	-3,020.5	670,430.16	582,291 50	1.16	264.24
6,253.0	91.70	263.10	3,445.8	119.7	-310.1	-3,063.1	670,424.73	582,248.86	2.47	264.22
6,296.0	92.00	262.70	3,444.4	121.1	-315.4	-3,105.8	670,419.42	582,206.22	1.16	264.20
6,339.0	91.80	262.40	3,443.0	122.5	-321.0	-3,148.4	670,413.85	582,163.61	0.84	264.18
6,382.0	92.30	262.30	3,441.4	124.1	-326.7	-3,191.0	670,408.13	582,121.02	1 19	264.15
6,425.0	92.60	263.90	3,439.6	125.9	-331.9	-3,233.6	670,402.97	582,078.38	3.78	264.14
6,468.0	92.70	265.60	3,437.6	127.9	-335.8	-3,276.4	670,399.04	582,035.61	3.96	264.15
6,511.0	92.00	266.70	3,435.9	129 6	-338.7	-3,319.2	670,396.15	581,992.75	3 03	264.17
6,554.0	91.80	267.40	3,434.4	131.1	-340.9	-3,362.2	670,393.94	581,949.83	1.69	264.21
6,597 0	92 10	267.80	3,433.0	132 5	-342.7	-3,405.1	670,392.14	581,906.90	1 16	264.25
6,639.0	91.90	267.60	3,431.5	134.0	-344.4	-3,447.0	670,390.46	581,864.96	0.67	264.29
6,681.0	90 40	266 70	3,430.7	134.8	-346 5	-3,489.0	670,388.37	581,823.03	4.16	264.33
6,724.0	89.30	266 00	3,430.8	134.7	-349 2	-3,531.9	670,385.63	581,780.12	3.03	264 35
6,767.0	89 50	265 30	3,431.2	134.3	-352 5	-3,574 8	670,382 37	581,737.25	1.69	264.37
6,810.0	89.80	265.20	3,431.5	134.0	-356.1	-3,617 6	670,378.81	581,694.40	0.74	264 38

Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well Quail State Com 3H
Project:	Paddock	TVD Reference:	WELL @ 3565 5usft (HWD 4)
Site:	Quail State Com 3H	MD Reference:	WELL @ 3565 5usft (HWD 4)
Well:	Quail State Com 3H	North Reference:	Grid
Wellbore:	Quail State Com 3H	Survey Calculation Method:	Minimum Curvature
Design:	Quail State Com 3H	Database:	EDM 5000.1 Single User Db

Survey											
MD (usft)	Inc (°)	Azi (azimuth) (°)	TVD (usft)	TVDSS (usft)	N/S (usft)	E/W (usft)	Northing (usft)	Easting (usft)	DLeg (°/100usft)	Closure Azimuth (°)	
6,853.0	90.20	265.50	3,431.5	134.0	-359.5	-3,660.5	670,375.33	581,651.55	1.16	264.39	
6,896.0	91.30	266.60	3,430.9	134.6	-362.5	-3,703.4	670,372.36	581,608.66	3.62	264.41	
6,939.0	91.30	266.80	3,429.9	135.6	-365.0	-3,746.3	670,369.89	581,565.75	0.46	264.44	
6,982.0	90.00	266.00	3,429.5	136.0	-367.7	-3,789.2	670,367.19	581,522.84	3.55	264.46	
7,025.0	90.30	265.40	3,429.3	136.2	-370.9	-3,832.1	670,363.97	581,479.96	1.56	264.47	
7,068.0	90.90	265.30	3,428.9	136.6	-374.4	-3,874.9	670,360.48	581,437.11	1.41	264.48	
7,111.0	91.00	264.80	3,428.2	137.3	-378.1	-3,917.8	670,356.77	581,394.28	1.19	264.49	
7,155.0	91.30	264.50	3,427.3	138.2	-382.2	-3,961.6	670,352.67	581,350.49	0.96	264.49	
7,197.0	91.20	264.00	3,426.4	139.1	-386.4	-4,003.3	670,348.46	581,308.71	1.21	264.49	
7,241.0	91.00	263.60	3,425.5	140.0	-391.2	-4,047.1	670,343.71	581,264.98	1.02	264.48	
7,284.0	90.00	262.70	3,425.2	140.3	-396.3	-4,089.8	670,338.58	581,222.29	3.13	264.47	
7,327.0	89.60	261.40	3,425.3	140.2	-402.2	-4,132.4	670,332.64	581,179.71	3.16	264.44	
7,370.0	91.10	261.60	3,425.0	140.5	-406.6	-4,174.9	670,326.28	581,137.19	3.52	264.41	
7,413.0	91.60	263.10	3,424.0	141.5	-414.3	-4,217.5	670,320.56	581,094.59	3.68	264.39	
7,456.0	91.90	264.50	3,422.7	142.8	-419.0	-4,260.2	670,315.92	581,051.87	3.33	264.38	
7,499.0	92.60	264.30	3,421.0	144.5	-423.1	-4,303.0	670,311.73	581,009.11	1.69	264.38	
7,542.0	92.90	264.50	3,419.0	146.5	-427.3	-4,345.7	670,307.54	580,966.37	0.84	264.38	
7,585.0	92.00	265.40	3,417.1	148.4	-431.1	-4,388.5	670,303.76	580,923.58	2.96	264.39	
7,628.0	92.20	265.40	3,415.6	149.9	-434.6	-4,431.3	670,300.31	580,880.75	0.47	264.40	
7,671.0	91.40	264.60	3,414.2	151.3	-438.3	-4,474.2	670,296.56	580,837.94	2.63	264.40	
7,714.0	91.30	264.10	3,413.2	152.3	-442.5	-4,516.9	670,292.33	580,795.16	1.19	264.40	
7,757.0	91.90	263.80	3,412.0	153.5	-447.1	-4,559.7	670,287.80	580,752.42	1.56	264.40	
7,800.0	92.20	263.10	3,410.5	155.0	-452.0	-4,602.4	670,282.90	580,709.74	1.77	264.39	
7,843.0	92.10	262.60	3,408.8	156.7	-457.3	-4,645.0	670,277.55	580,667.10	1.19	264.38	
7,896.0	91.98	261.98	3,407.0	158.5	-464.4	-4,697.5	670,270.45	580,614.62	1.19	264.35	
Quail State Com 3H BHL											

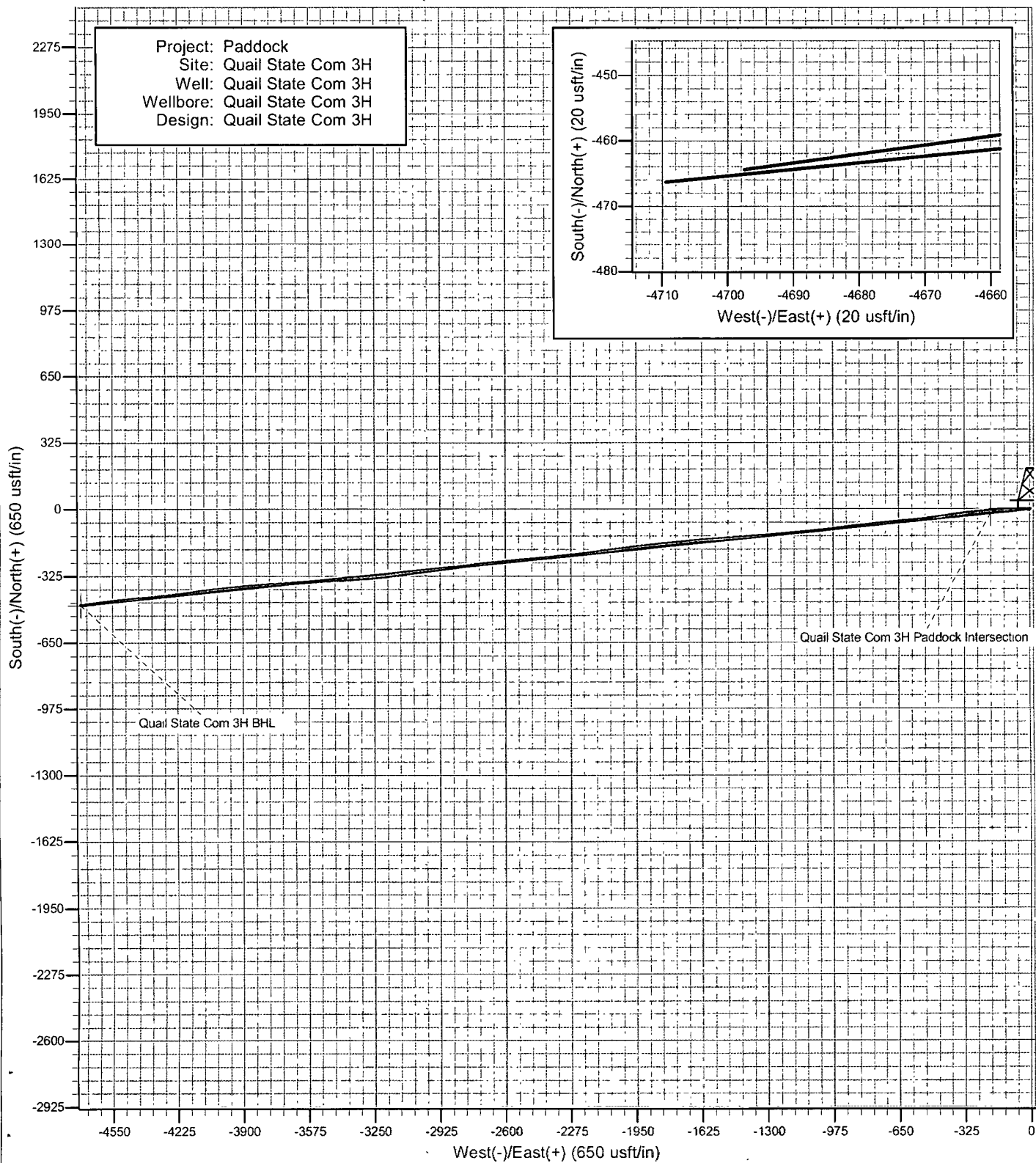
Company:	Murchison Oil and Gas	Local Co-ordinate Reference:	Well Quail State Com 3H
Project:	Paddock	TVD Reference:	WELL @ 3565 5usft (HWD 4)
Site:	Quail State Com 3H	MD Reference:	WELL @ 3565 5usft (HWD 4)
Well:	Quail State Com 3H	North Reference:	Grid
Wellbore:	Quail State Com 3H	Survey Calculation Method:	Minimum Curvature
Design:	Quail State Com 3H	Database:	EDM 5000.1 Single User Db

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
377.0	377.0	9 5/8" Surface Casing	9-5/8	12-1/4

Formations				
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip Direction (°)
3,346.0	3,286.4	Glorietta		0.00
3,404.0	3,324.9	Paddock		

Checked By: _____	Approved By: _____	Date: _____
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	Azimuths to Grid North True North: -0.08° Magnetic North: 7.74° Magnetic Field Strength: 48884.1 nT Dip Angle: 60.66° Date: 13/03/2012 Model: IGRF200510	COMPANY DETAILS: Murchison Oil and Gas Drilling Calculation Method: Minimum Curvature Error System: ISCWSA Scan Method: Closest Approach 3D Error Surface: Elliptical Conic Warning Method: Error Ratio	PROJECT DETAILS: Paddock Geodetic System: US State Plane 1983 Datum: North American Datum 1983 Ellipsoid: GRS 1980 Zone: New Mexico Eastern Zone System Datum: Mean Sea Level
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Azimuths to Grid North
True North: -0.08°
Magnetic North: 7.74°

Magnetic Field
Strength: 48884.1nT
Dip Angle: 60.66°
Date: 13/03/2012
Model: IGRF200510

COMPANY DETAILS: Murchison Oil and Gas

Drilling
Calculation Method: Minimum Curvature
Error System: ISCWSA
Scan Method: Closest Approach 3D
Error Surface: Elliptical Conic
Warning Method: Error Ratio

PROJECT DETAILS: Paddock

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

