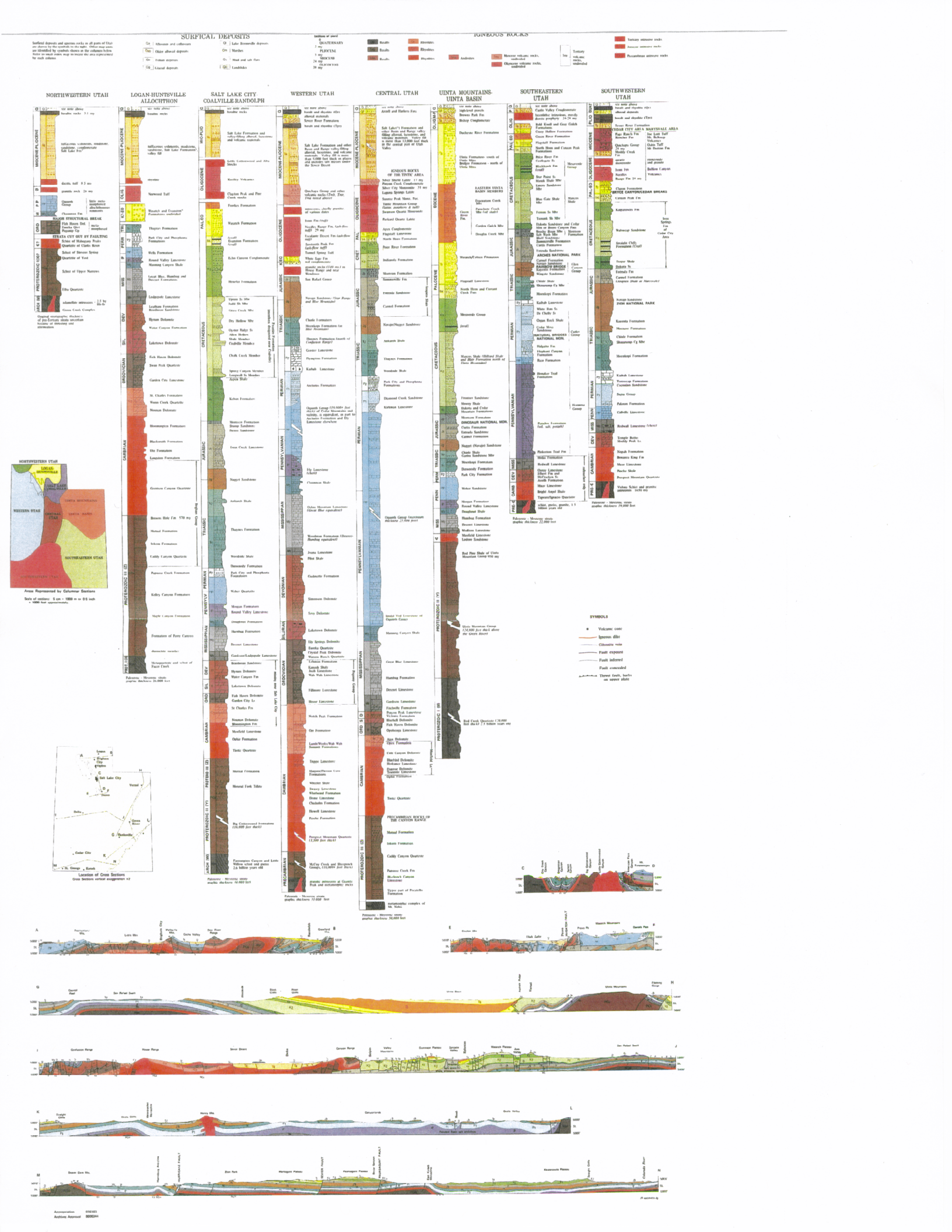
ATTACHMENT 1

STRATIGRAPHIC COLUMNS AND CROSS SECTIONS

IN THE

PLANNING AREA

(Hintze, et al, 2000; UGMS, 1980)


SURFICAL DEPOSITS
IGNEOUS ROCKS
NORTHWESTERN UTAH
LOGAN-HUNTSVILLE ALLOCHTHON
SALT LAKE CITY COALVILLE RANDOLPH
WESTERN UTAH
CENTRAL UTAH
UINTA MOUNTAINS-UINTA BASIN
SOUTHEASTERN UTAH
SOUTHWESTERN UTAH
SYMBOLS
Volcanic cone
Igneous dike
Silicified zone
Fault exposed
Fault inferred
Fault concealed
Thrust fault, barbs on upper plate
Areas Represented by Columnar Sections
Location of Cross Sections

Attachment 2, Mineral Potential Classification System

Potential Code	Description
O	The geologic environment, inferred geologic processes, and lack of mineral occurrences indicate *no potential* for the accumulation of mineral resources.
L	The geologic environment and inferred geologic processes indicate a *low potential* for the accumulation of mineral resources.
M	The geologic environment, inferred geologic processes, and reported mineral occurrences or valid geochemical or geophysical anomaly indicate a *moderate potential* for accumulation of mineral resources.
H	The geologic environment, inferred geologic processes, reported mineral occurrences or valid geochemical or geophysical anomaly, and known mines or deposits indicate a *high potential* for the accumulation of mineral resources. The known mines and deposits do not have to be in the area that is being classified but have to be in the same type of geologic environment.
ND	Minerals potential *not determined* because of a lack of useful data. This notation does not require a level-of-certainty qualifier.
Certainty Code	**Description**
A	The available data are *insufficient* or cannot be considered as direct or indirect evidence to support or refute the possible existence of mineral resources in the respective area.
B	The available data provide *indirect evidence* to support or refute the possible existence of mineral resources.
C	The available data provide *direct evidence* but are insufficient in number to support or refute the possible existence of mineral resources.
D	The available data provide *abundant direct* and *indirect evidence* to support or refute the possible existence of mineral resources.

Source: BLM Manual 3031, Attachment 2 (BLM, 1985).

Attachment 3, Oil and Gas Well Information

Well Name	Location	County	Total Depth (ft)	Show	Status	Test Zone/Formation	Remarks
1 Rocky Ford	27 30S 3W	Piute	9,350	None	D&A	Kaibab	Recovered water
1 Antimony Canyon	30 30S 2W	Piute	7,926	None	D&A	Mississippian	Cored Kaibab, a dolomitic limestone
1 Core Hole	18 30S 2W	Piute	2,388	None	D&A	None	
2 Core Hole	30 30S 2W	Piute	1,654	None	D&A	None	
1 Johnston Livestock et al	28 23S 3E	Sevier	11,080	None	D&A	Twin Creek and Ferron	DST Twin Creek, no show, recovered water
3 MC	15 25S 3W	Sevier	1,471	None	D&A	NA	Recovered artesian water
5-1 Paradise Lake Unit	5 25S 4E	Sevier	1,752	None	D&A	NA	
36-16 State of Utah V	36 23S 4E	Sevier	2,320	NA	D&A	NA	Terminated in Ferron
17-1 Kings Meadow Ranches	17 23S 1W	Sevier	Not Available	NA	P	Navajo	
1 Johnson	31 23S 5E	Sevier	3,340	None	D&A	NA	Terminated in Cedar Mountain, recovered water
1 Coral-Federal	2 24S 4E	Sevier	4,100	None	D&A	Dakota	Recovered water
1A-1 South Mount Terrill	1 26S 3E	Sevier	11,000	Gas (CO_2)	D&A	Redwall, Toroweap, Kaibab, Shinarump	Good Kaibab show (320 ft) of gas, oil, and mud cut water also show in Shinarump
1 Sigurd Unit	14 22S 1W	Sevier	9,080	None	D&A	Kaibab	Recovered water
1-1 South Mount Terrill	1 26S 3E	Sevier	2,351	None	D&A	NA	Recovered water
1 Salina Unit	33 22S 1W	Sevier	17,423	None	D&A	NA	
1 Paxton	28 24S 4W	Sevier	14,826	Slight show gas	D&A	Desert Limestone	Recovered water in DST
1 Maple Springs Unit	3 23S 2E	Sevier	12,281	None	D&A	Blue Gate, Ferron, Twin Creek	Recovered water
1 Red Cliffs Unit	15 26S 4E	Sevier	6,485	None	D&A	Glen Canyon, Moenkopi, Kaibab	Recovered water
1 Unit	34 22S 5E	Sevier	10,740	CO_2 cut sulfur water in Conconino, Permian, and Mississippian	D&A	Sinbad, Conconino, Permian, Mississippian	Recovered sulfur water with gas

Attachment 3, Oil and Gas Well Information

Well Name	Location	County	Total Depth (ft)	Show	Status	Test Zone/Formation	Remarks
1 Porcupine	30 22S 3E	Sevier	6,308	Weak gas flow	D&A	Ferron	
1 Sigurd Unit	32 22S 1W	Sevier	9,638	3,000-cf gas show	D&A	Navajo	
1 Desert Wash Unit	14 25S 5E	Sevier	2,733	None	D&A	None	
1 Old Woman-Federal	2 23S 4E	Sevier	5,740	None	D&A	None	
1-A Desert Wash Unit	14 25S 5E	Sevier	4,590	Gas show in Moenkopi	D&A	Shinarump, Moenkopi	Good gas blow for I hour
1 Pierce	12 22S 4E	Sevier	3,973	None	D&A	Ferron	
1 Unit	15 22S 2E	Sevier	6,117	None	D&A	Ferron, Mancos	
1 Unit	17 22S 4E	Sevier	6,471	None	D&A	Star Point, Mancos, Ferron, Dakota, Cedar Mountain	
1 Govt	23 22S 5E	Sevier	3,710	None	D&A	Ferron	
1 Govt-Bliss	13 25S 5E	Sevier	4,493	None	D&A	Conconino	
1 Fee	25 21S 1W	Sevier	720	None	D&A	NA	
43-8 Paradise Lake Unit	8 25S 4E	Sevier	3,990	Slight oil show in Dakota	D&A	Ferron, Dakota	Recovered water
A-1 Ferron Federal	36 21S 5E	Sevier	3,008	None	D&A	NA	
1-21 Muley Federal	21 36S 10E	Garfield	3,079	Oil show in White Rim	D&A	NA	
1 Henry Mountain Unit	20 31S 11E	Garfield	6,220	None	D&A	None	
1-17 Henry Mountain-Fed	17 32S 11E	Garfield	2,278	None	D&A	None	
42-15 Lone Cedar-Fed	15 31S 12E	Garfield	5,250	None	D&A	None	
1-A Poison Canyon	5 31S 12E	Garfield	3,048	None	D&A	Organ Rock and Conconino	
1 Ellen Unit	24 31S 9E	Garfield	8,051	None	D&A	White Rim	
29-1 Muley Creek Fed	29 36S 10E	Garfield	9,995	None	D&A	None	
44-32 State	32 31S 15E	Garfield	700	None	D&A	None	
14-36 Technology	36 31S 14E	Garfield	1,000	None	D&A	None	

Attachment 3, Oil and Gas Well Information

Well Name	Location	County	Total Depth (ft)	Show	Status	Test Zone/Formation	Remarks
14-15 Hatch Canyon Unit	15 31S 15E	Garfield	1,540	None	D&A	None	Three wells drilled in the same vicinity
1 Garfield C	10 31S 13E	Garfield	4,052	None	D&A	None	
1 Garfield-K	16 31S 13E	Garfield	4,300	None	D&A	None	
1 Hog Canyon	8 33S 13E	Garfield	6,625	None	D&A	None	
34-16A Hatch Canyon State	16 31S 15E	Garfield	440	None	D&A	None	
1 Federal-20	20 36S 10E	Garfield	4,010	Oil show in White Rim	D&A	White Rim	
1 Bloody Hands Gap	36 31S 7E	Garfield	6,648	Slight gas show in Hermosa	D&A	Hermosa, Redwall	Recovered water
1 Dirty Devil-Fed	7 31S 13EE	Garfield	4,750	None	D&A	None	
A-2 USA-Poison Springs	4 31S 12E	Garfield	5,358	Oil show in Cedar Mesa	D&A	Coconino, Cedar Mesa, Hermosa	Recovered mud and water
1 East Muley Creek	19 36S 11E	Garfield	3,032	None	D&A	White Rim	
24-7 Federal-Cave Flat	24 33S 9E	Garfield	6,242	None	D&A	None	
22-4 Fed-Apple-Bush Flat	22 31S 9E	Garfield	6,804	None	D&A	None	
36-33 Muley Creek State	36 35S 9E	Garfield	4,142	None	D&A	None	
1 Muley Creek Unit	18 36S 10E	Garfield	8,362	None	D&A	Hermosa, Redwall, Devonian, Moenkopi	
22-19 Utah Southern-Govt	19 31S 15E	Garfield	4,306	Oil show in Madison	D&A	Hermosa, Chimney Rock, Mississippian	Recovered oil and water
1-A USA-Poison Springs	4 31S 12E	Garfield	6,491	Gas show in Cedar Mesa and Wolfcamp, oil in Hermosa and Paradox	D&A	Wingate, Shrinarump, Sinbad, Cedar Mesa, Wolfcamp, Hermosa, Paradox	
1 Poison Springs Core Hole	4 31S 12E	Garfield	5,188	None	D&A	None	
14-2 Swap Mesa Unit	2 34S 9E	Garfield	9,682	Gas show in Mississippian	D&A	Permian, Mississippian	Recovered water

Attachment 3, Oil and Gas Well Information

Well Name	Location	County	Total Depth (ft)	Show	Status	Test Zone/Formation	Remarks
1 Bert Mesa Unit	13 31S 13E	Garfield	4,390	None	D&A	None	
1 Dirty Devil-Fed	5 31S 12E	Garfield	5,420	Gas show in Coconino	D&A	Coconino	
1 Crescent Creek	27 31S 11E	Garfield	1,026	None	D&A	None	
1-X Crescent Creek	27 31S 11E	Garfield	6,683	None	D&A	None	
41-33 Robbers Roost	33 30.5S 16E	Garfield	4,380	None	D&A	None	
23-8 Hatch Canyon Unit	8 31S 15E	Garfield	1,100	None	D&A	None	
33-29 Hatch Canyon Unit	29 31S 15E	Garfield	700	None	D&A	None	
44-4 Hatch Canyon Unit	4 31S 15E	Garfield	1,640	None	D&A	White Rim	
44-15 Hatch Canyon Unit	15 31S 15E	Garfield	1,000	None	D&A	None	
31-16 State	16 32S 15E	Garfield	1,770	None	D&A	None	
11-2 State	2 32S 15E	Garfield	520	None	D&A	None	
1 USA	24 31S 12E	Garfield	6,150	Good gas shows in Akah and Mississippian	D&A	Akah, Mississippian	Recovered water
2 Turkey Knob	36 31S 12E	Garfield	3,700	None	D&A	None	
22-7 Federal Apple	22 31S 9E	Garfield	6,249	None	D&A	Moenkopi	Recovered water
34-16B Hatch Canyon Unit	16 31S 15E	Garfield	800	None	D&A	White Rim	
34-16C Hatch Canyon Unit	16 31S 15E	Garfield	510	None	D&A	None	
2 USA	4 31S 12E	Garfield	4,360	None	D&A	None	
1 Fed-Bullfrog Creek	21 36S 10E	Garfield	3,043	Oil show in White Rim	D&A	White Rim	
1 Turkey Knob	23 31S 12E	Garfield	5,080	None	D&A	None	
1 Govt	19 36S 9E	Garfield	Not reported	None	D&A	None	
1 Garfield-Federal	8 31S 13E	Garfield	4,250	None	D&A	Ismay	Recovered water

Attachment 3, Oil and Gas Well Information

Well Name	Location	County	Total Depth (ft)	Show	Status	Test Zone/Formation	Remarks
1 Poison Canyon-Fed	5 31S 12E	Garfield	1,050	None	D&A	None	
7-25 Madison	25 17S 2E	Sanpete	5,510	None	D&A	None	
1 Mt. Baldy	24 12S 3E	Sanpete	15,240	None	D&A	None	
1 Christiansen	22 15S 3E	Sanpete	10,747	None	D&A	None	
1 Lamb Trust	31 15S 3E	Sanpete	Not reported	None	D&A	None	
1 Moroni	14 15S 3E	Sanpete	3,128	None	D&A	None	
1-A Moroni	14 15S 3E	Sanpete	7,744	None	D&A	None	
1 Larson Unit	1 17S 2E	Sanpete	14,043	None	D&A	None	Cored Ferron and pressure test Cedar Mountain
2 Larson Unit	1 17S 2E	Sanpete	2,514	Slight gas show in Ferron	D&A	Ferron	Recovered water in lower Ferron
1-17 Federal	17 14S 6E	Sanpete	7,950	Gas show in Dakota	D&A	Ferron and Dakota	Recovered water in both zones
4-2 Barton	2 18S 2E	Sanpete	2,681	None	D&A	None	
4 Joes Valley Unit	29 15S 6E	Sanpete	Not reported	None	D&A	None	
1 Chriss Canyon Unit	33 16S 1E	Sanpete	17,532	None	D&A	PT Salt	
1A-X Moroni	14 15S 3E	Sanpete	21,264	Gas show in Tununk	D&A	PT Tununk	
1 Musinia Unit	20 20S 4E	Sanpete	8,952	Gas show in cores in Ferron	D&A	Cored Ferron and Mancos	Recovered water
Not reported	27 15S 4E	Sanpete	1,408	None	D&A	None	
1 Dye	5 16S 3E	Sanpete	7,016	None	D&A	None	
1AXZ Fee	14 15S 3E	Sanpete	12,128	Good gas show in Tununk and 1,350 barrels of oil	D&A	Tununk	Recovered oil, water, and gas (300 mcf/8 days)
1AX2H Cimarron Energy	14 15S 3E	Sanpete	12,477	1 BOD in Tununk	D&A	Tununk	Recovered 1 BOD
5 Unit	19 15S 6E	Sanpete	4,970	None	D&A	None	
1-X Joes Valley	17 15S 6E	Sanpete	7,262	8,200 mcf/day in Ferron	D&A	None	

Attachment 3, Oil and Gas Well Information

Well Name	Location	County	Total Depth (ft)	Show	Status	Test Zone/Formation	Remarks
3 Joes Valley	20 15S 6E	Sanpete	7,800	Good gas shows in Ferron and Dakota	D&A	PT Ferron, Dakota	4,000 mcf/day in Ferron and 1,000 mcf/day in Dakota
1-X Joes Valley	17 15S 6E	Sanpete	8,088	Good gas shows in Ferron and Dakota	D&A	PT Ferron, Dakota	4,030 mcf/day in Ferron and 4,000 mcf/day in Dakota
5 X	19 15S 6E	Sanpete	8,135	None	D&A	None	
13-14 Anderson	14 18S 2E	Sanpete	2,649	None	D&A	None	
1 Black Canyon-Fed	16 16S 5E	Sanpete	8,100	None	D&A	None	
1 Govt	3 19S 1E	Sanpete	1,780	None	D&A	None	
1J W Irons	16 15S 3E	Sanpete	9,995	Gas shows in Ferron, Mancos, and Dakota	D&A	Star Point, Ferron, Mancos, Dakota	Recovered mud cut gas
1 Brotherson	13 15S 3E	Sanpete	1,730	None	D&A	None	
1 Govt	24 20S 1W	Sanpete	1,462	None	D&A	None	
1 Ephraim Creek	23 16S 4E	Sanpete	7,767	Gas shows in Ferron and Dakota	D&A	Ferron, Dakota	100 mcf/day from both zones
1 Joes valley	17 15S 6E	Sanpete	465	None	D&A	None	
1 Jensen	16 14S 5E	Sanpete	9,114	None	D&A	Ferron, Dakota	Recovered water
2 Joes Valley	23 16S 5E	Sanpete	8,520	None	D&A	None	
1 Colleen Steiner	18 15S 6E	Sanpete	3,805	None	D&A	None	
1AX2H Cimarron Energy	14 15S 3E	Sanpete	11,639	None	D&A	None	
1 Utah Fed-C	36 12S 5E	Sanpete	9,130	None	D&A	Ferron	Recovered water
1AXZH Cimarron Energy	14 15S 3E	Sanpete	11,828	None	D&A	None	
1 Producers Oil Co	3 17S 3E	Sanpete	921	None	D&A	None	
1 Brotherson	13 15S 3E	Sanpete	1,751	None	D&A	None	

Attachment 3, Oil and Gas Well Information

Well Name	Location	County	Total Depth (ft)	Show	Status	Test Zone/Formation	Remarks
1 Neilson-Seager	1 13S 2E	Sanpete	9,500	None	D&A	None	
1 Price N	29 15S 3E	Sanpete	12,332	Slight gas show in Ferron	D&A	Ferron PT	
1 United States E	27 19S 3E	Sanpete	20,450	None	D&A	Star Point, Ferron, Sinbad, Mancos, Dakota	
6-6 Christensen	6 16S 3E	Sanpete	Not reported	None	D&A	None	
14-30 Sorenson	30 16S 3E	Sanpete	4,010	None	D&A	Ferron	Recovered salt water
1-11 WC Federal	11 13S 5E	Sanpete	10,250	None	D&A	Emery Sandstone, Ferron	
1 United	16 13S 6E	Sanpete	8,107	Good gas show in Ferron	D&A	Ferron	Estimated 20 mcf/day production
1 Merion	8 19S 1E	Sanpete	1,922	None	D&A	None	
3 Dirty Devil Unit	4 30S 13E	Wayne	2,060	None	D&A	None	
1 Classic Whitney Fed	23 29S 14E	Wayne	5,018	None	D&A	None	
1 Federal	15 30S 16E	Wayne	1,727	None	D&A	None	
4 Dirty Devil Unit	15 30S 14E	Wayne	4,494	None	D&A	Moenkopi	Recovered mud and water
1 USA-Pexco	19 30S 12E	Wayne	6,026	Oil and gas shows in Hermosa	D&A	Hermosa, Moenkopi, Kaibab, White Rim, Cedar Mesa, Mississippian	
1 USA Teasdale	8 30S 6E	Wayne	5,287	Oil shows in Lynch Dolomite and Pennsylvanian	D&A	PT Pennsylvanian, Lynch Dolomite, Ouray Limestone, Mississippian	Slight oil show, recovered water
19-1 Gordon Flats	18 30S 16E	Wayne	1735	None	D&A	None	
16-1 Gordon Flats	16 30S 16E	Wayne	1,676	None	D&A	None	
11-20 Biddlecome Ranch	20 28S 14E	Wayne	5,164	Gas show in Desert Creek	D&A	Desert Creek	Recovered water
1-25 Federal	25 27S 14E	Wayne	2,656	None	D&A	None	
1Federal Penitentiary	30 29S 12E	Wayne	2,798	Oil and gas shows in Kaibab	D&A	Kaibab	Recovered water and mud

Attachment 3, Oil and Gas Well Information

Well Name	Location	County	Total Depth (ft)	Show	Status	Test Zone/Formation	Remarks
2 Dirty Devil Unit	4 30S 13E	Wayne	1,848	None	D&A	None	
1 Dirty Devil Unit	4 30S 13E	Wayne	6,129	Gas shows in White Rim, Pinkerton Trail, and Mississippian	D&A	Moenkopi, White Rim, Paradox, Pinkerton Trail, Redwall	Gas blew down in 45 min, recovered water
1 DU-USA	27 28S 17E	Wayne	5,075	None	D&A	None	
1 Sagadahoc-Skyline	16 30S 16E	Wayne	1,712	Good oil show in White Rim	D&A	Cored White Rim	Recovered oil and water
1 Teasdale	16 30S 6E	Wayne	8700	Gas show in Tapeats	D&A	Tapeats, Granite	Gas show, recovered water
33-1 Sorrel Buttes	33 29S 12E	Wayne	2,406	None	D&A	Cored Moenkopi	Water
1-27 Tanner	27 28S 3E	Wayne	7,100	Gas shows in Sinbad and Elbert	D&A	Sinbad and Elbert	170,000 mcf/day in Elbert
1-3 Federal	3 27S 15E	Wayne	2,430	None	D&A	None	
6 Nequoia Arch Unit	32 27S 15E	Wayne	8,096	Gas show in Mississippian	D&A	Shinarump, Coconino, Devonian, Mississippian	Recovered water
1 Mott	20 29S 5E	Wayne	250	None	D&A	None	
1 Hoover Federal	20 29S 15E	Wayne	6,886	None	D&A	Chinle, Hermosa, Mississippian	Recovered water
1 Govt-Mandel	31 27S 14E	Wayne	5,596	None	D&A	Akah	
1 Cainville Unit	29 28S 8E	Wayne	7,159	Oil show in Coconino	D&A	Coconino, Pennsylvanian, Mississippian	Recovered water
3 Federal	35 30S 13E	Wayne	2,616	None	D&A	None	
1758 Federal	1 29S 13E	Wayne	2,649	Slight gas show in Moenkopi	D&A	Moenkopi	Recovered water
1 French Sheep	27 30S 16E	Wayne	5,917	None	D&A	Mississippian	
2 Skyline Federal	22 30S 16E	Wayne	1,580	Oil show in White Rim	D&A	Cored White Rim	Good oil show
1 Unit	11 28S 4E	Wayne	6,907	Oil show in Sinbad	D&A	Sinbad, Coconino, Wasatch, Mesaverde	Recovered water
1 State Buck Canyon	32 28S 12E	Wayne	2,525	None	D&A	Moenkopi, White Rim	Recovered water
1 Burr Federal	33 29S 12E	Wayne	6,587	None	D&A	PT White Rim, Coconino	Recovered water

Attachment 3, Oil and Gas Well Information

Well Name	Location	County	Total Depth (ft)	Show	Status	Test Zone/Formation	Remarks
1 USA Pinto Hills	5 28S 11E	Wayne	7,301	None	D&A	Moenkopi, Mississippian	Recovered water
32-33 Horseshoe Canyon Unit	33 27S 16E	Wayne	6,967	Oil show in Mississippian	D&A	Moenkopi, Mississippian	Recovered water with good oil show
31-30 Hanksville Unit	30 27S 13E	Wayne	7,664	Oil and slight gas shows in Mississippian and Paradox	D&A	Moenkopi, Mississippian, Paradox	Recovered water and mud with oil
6-11 Federal	6 30S 16E	Wayne	2,156	None	D&A	None	
1 Orange Cliffs	8 29S 16E	Wayne	6,675	Good gas show in Mississippian	D&A	Mississippian	Good gas flow to surface
1 USA	1 27S 16E	Wayne	6,791	None	D&A	None	
1 Lion Mountain	19 30S 5E	Wayne	4,240	None	D&A	PT Sinbad, White Rim, Kaibab	
2 Thousand Lakes Mountain Unit	25 28S 4E	Wayne	5,480	None	D&A	None	
1 Govt	5 27S 14E	Wayne	2,875	Oil show in Coconino	D&A	None	
A-1 Paradox Brown	26 30S 13E	Wayne	4,202	Oil show in Hermosa	D&A	Hermosa	
1 Spring Canyon	13 28S 5E	Wayne	6,105	Oil show in Toroweap	D&A	Coconino, Wolfcamp, Pennsylvanian, Mississippian, Toroweap	Recovered water and mud
1 J H Schick	16 27S 16E	Wayne	5,191	None	D&A	None	
2 Federal	27 30S 13E	Wayne	4,122	Oil show in Hermosa	D&A	PT Hermosa	Cored Hermosa
1 Unit	17 30S 6E	Wayne	4,932	Oil show in Hermosa	D&A	Coconino, Hermosa	
4 Nequoia	14 28S 14E	Wayne	6,975	None	D&A	None	
1 Govt	29 28S 8E	Wayne	3,650	None	D&A	None	
1 Deadman Hollow Unit	23 27S 1E	Wayne	7,922	None	D&A	Carmel	Recovered water
1 Govt	34 29S 16E	Wayne	2,200	None	D&A	None	
2	9 27S 12E	Wayne	2,715	Oil show in Navajo	D&A	None	

Attachment 3, Oil and Gas Well Information

Well Name	Location	County	Total Depth (ft)	Show	Status	Test Zone/Formation	Remarks
A-1 USA Sorrel Butte	33 29S 12E	Wayne	6,587	Oil shows in Hermosa and Cedar Mesa and gas show in Hermosa	D&A	Coconino, Hermosa	10 BOD estimated
1 Blackburn Draw Unit	9 27S 12E	Wayne	6,430	Oil show in Moenkopi	D&A	Moenkopi, Mississippian, Paradox	
1 South Hanksville ST	36 27S 13E	Wayne	6,820	Oil show in Moenkopi and gas show in Hermosa	D&A	Moenkopi, Hermosa, Mississippian, Paradox	
1 W M Day	4 27S 12E	Wayne	2,950	Oil show in Shinarump	D&A	None	
1 Blue Mesa	8 29S 10E	Wayne	8,174	None	D&A	Sinbad, Kaibab, Cedar Mesa, Organ Rock, Hermosa, Paradox, Leadville, Madison	
5 Nequoia Arch Unit	17 27S 14E	Wayne	6,520	None	D&A	Moenkopi, Sinbad, Virgin, Paradox	
1 Utah State	2 29S 11E	Wayne	2,847	Oil show in Sinbad	D&A	Moenkopi, Sinbad, Coconino	Recovered water
2 Unit	35 27S 15E	Wayne	5,516	Oil shows in Hermosa and Paradox	D&A	Shinarump, Moenkopi, Rico, Hermosa, Paradox	Recovered water
2 Gulf Energy Burr	29 29S 12E	Wayne	2,731	None	D&A	Moenkopi	Recovered water
1 Hanksville Unit	6 27S 11E	Wayne	7,200	Gas shows in Moenkopi, White Rim, and Kaibab	D&A	Moenkopi, Kaibab, White Rim	Good gas shows in Kaibab and Moenkopi, blow to surface
2 Burr Desert	21 30S 12E	Wayne	5,822	None	D&A	Sinbad, Desert Creek	
1-1 Fish Lake	1 27S 3E	Wayne	11,400	Gas shows in Elbert, Redwall, Hermosa, and Kaibab	D&A	PT Elbert, Redwall, Hermosa, Conconino, Moenkopi	Good gas shows in Hermosa (4.2 mcf/day) and Kaibab (2,378 mcf/day), gas has CO_2
1 Govt	26 30S 16E	Wayne	1,666	None	D&A	None	
11-4 Federal	4 27S 7E	Wayne	4,865	Gas show in Kaibab	D&A	Sinbad, Kaibab, White Rim	Recovered water and mud

Attachment 3, Oil and Gas Well Information

Well Name	Location	County	Total Depth (ft)	Show	Status	Test Zone/Formation	Remarks
1 Burr Desert	24 30S 12E	Wayne	6,880	Slight gas shows in Cedar Mesa and Mississippian	D&A	Mississippian, Ismay	Recovered water and mud
1-9 Paradox	9 27S 12E	Wayne	2,745	None	D&A	PT Kaibab, Sinbad	
1-23 Govt	23 27S 4E	Wayne	1,917	None	D&A	None	
22-6 Henry Basin Federal	22 29S 11E	Wayne	3,320	None	D&A	Moenkopi	
1 Unit	5 27S 14E	Wayne	5,940	Slight gas shows in Rico and Paradox	D&A	Moenkopi, Sinbad, Rico, Paradox	
1-33 Federal Caineville	33 28S 8E	Wayne	3,700	None	D&A	Kaibab	
1758 Federal	1 29S 13E	Wayne	6,404	None	D&A	PT Wingate, Mississippian, Paradox	
3-X Federal	35 30S 13E	Wayne	3,557	None	D&A	None	
1 Government	34 30S 13E	Wayne	6,301	Good gas show in Hermosa, oil shows in Hermosa and Paradox	D&A	Hermosa, Mississippian	80 mcf/day in Hermosa
1 Unit	17 30S 6E	Wayne	4,932	Oil show in Coconino	D&A	Coconino	
1 Murphy Govt	13 27S 14E	Wayne	5,700	Oil show in Moenkopi	D&A	Moenkopi	
1 Moroni Slopes	13 27S 8E	Wayne	6,235	None	D&A	None	
1 Govt Hickman	30 29S 5E	Wayne	3,768	Oil shows in Coconino and Toroweap	D&A	Kaibab, Conconino	Dead oil stain
17-6 Henry Basin Federal	17 29S 11E	Wayne	3,706	None	D&A	Sinbad	Recovered water

NA = NOT AVAILABLE; D&A = DRILLED AND ABANDONED; P = PRODUCING; BOD = BARRELS OF OIL PER DAY;
DST = DRILL STEM TEST

ATTACHMENT 4

STRATIGRAPHIC COLUMNAR SECTIONS

(56, 79, 82, 88, 89, and 92)

IN THE

PLANNING AREA

(Hintze, 1988)

Chart

56 FAIRVIEW - SCOFIELD AREA

			FEET	
Q		Alluvium, valley fill	0-500	thickest in Sanpete Valley
TERTIARY		Alkalic diabase dikes & sills	1-5' wide	5 m.y.
		Mica-peridotite dikes & sills	1-5' wide	24 m.y.
		Moroni Formation	0-700	agglomerate, tuff & welded tuff, qtzt conglomerate at base
	Green River Fm	Upper member	1400-2000	formerly called Crazy Hollow calcareous shale & ls. minor ss & cg
		Middle member	320	algal, ostracodal, oolitic
		Lower member	580	green and brown shale & ss, lesser ls, cg
	Colton Formation		200 +	red sh, ss, mostly covered
	Flagstaff Limestone		300 +	
	North Horn Formation		1400-2000	prone to slumping thin lignite beds
CRETACEOUS	Mesaverde Group	Price River Formation	240-320	
		Castlegate Sandstone	220-320	
		Blackhawk Formation	1100-1300	coal
		Star Point Sandstone	300-600	Three States Utah Fuel #6 18-13S-7E and Pacific-Western Gordon Creek #1 24-14S-7E and Skelly #5 Unit 25-14S-7E
	Mancos Shale	Upper Blue Gate Shale Member (formerly incorrectly called Masuk Mbr)	1050	
		Emery Sandstone Member	1400-1700	
		Lower Blue Gate Shale Member	1850	dark gray marine shale
		Ferron Ss Mbr	490	
		Tununk Sh Mbr	330	dark gray marine shale
	Dakota Sandstone		160	
	Cedar Mountain Formation		1440	formerly identified as "Morrison?"
JURASSIC	Summerville Formation		450-520	equivalent to the Twist Gulch Fm in Sanpete Valley
	Curtis Formation		170-240	
	Entrada Formation		1080-1150	equivalent to the Arapien Shale in Sanpete Valley
	Carmel Formation		1220	Twin Creek Ls equiv (lower part)
	Navajo Sandstone		340	
	Kayenta Formation		130	
	Wingate Sandstone		350	
TRIASSIC	Chinle Shale		280-330	
	Moenkopi Fm	Upper member	750	
		Sindbad Ls Mbr	100	
		Lower member	360	
PERM	Park City Formation		230	
	Diamond Creek Sandstone		750	
	Older strata not penetrated by drill			

Chart

79 SALINA CANYON MOUTH

			FEET	
Q		Alluvium, colluvium, lake beds	0-300	
TERTIARY		Osiris Tuff	0-330	23 m.y. volcaniclastic ss
		Fm of Black Cap Mtn	0-600	
		Tuff of Albinus Canyon ?	0-250	25 m.y.
		Three Creeks Tuff Mbr	0-30	27 m.y.
		Unnamed ss, cg, mudstone	0-100	30 m.y. tuffaceous ss
		Formation of Aurora	0-1400	bentonitic 39 m.y. formerly Bald Knoll Fm
		Crazy Hollow Formation	500-1000	red & pink mudstone salt & pepper ss
	Green River Fm	Upper member	730	pale yellow algal ls 44 m.y. K-Ar on tuffs
		Lower member	430	green shale
	Colton Formation		100-530	red mudstone
	Flagstaff Limestone		0-100	ss, cg, ls, mudstone
	North Horn Formation		0-1500	STRATA BELOW THE NORTH HORN FM ARE STEEPLY TILTED
CRETACEOUS	Indianola Group	Sixmile Canyon Formation (not exposed in Salina Canyon) (fluvial sandstone &siltstone in upward-fining cycles)	4500	*Names of equivalent units on east side of Wasatch Plateau; Castlegate Ss*; Blackhawk Fm*; Upper Blue Gate Sh* (formerly Masuk Sh); Emery Ss*
		Funk Valley Formation (only lower third exposed in Salina Canyon) (marine shale and near-shore sandstone)	2400	Lower Blue Gate Sh*; Ferron Ss*
		Allen Valley Shale	900	Tununk Shale
		Sanpete Formation	1200	Dakota Ss
	Cedar Mountain Fm		850	90-96 m.y. FT zircon from bentonite bed
JURASSIC	Twist Gulch Fm	Summerville equiv ?	10	
		Curtis Fm equiv	200	yellow ss
		Entrada Ss equivalent	1700	reddish-brown siltstone mudstone & sandstone
	Arapien Shale	Unit E	400	salt-bearing shale
		Unit D	3000	gypsiferous shale mudstone & sandstone
		Unit C	1000	gypsum
		Units A & B	400	equivalent to Leeds Creek Mbr Twin Creek Ls
Mz	Subsurface Mesozoic strata		3300 +	pre-Arapien strata
Pz	Subsurface Paleozoic strata		3400 +	likely nearly horizontal

Chart
82 HANKSVILLE AREA

				FEET	
Q	Alluvium & dune sand			0-100	sand from Entrada Fm
K	Morrison Fm	Brushy Basin Member		300-320	dinosaur bone varicolored rocks
JURASSIC	Morrison Fm	Salt Wash Ss Member		250-200	
	Morrison Fm	Tidwell Member		100	
	San Rafael Group	Summerville Fm		100	J-5 unconformity
	San Rafael Group	Curtis Formation		60	J-3 unconformity
	San Rafael Group	Entrada Formation		560	stone babies of Goblin Valley St Pk
	San Rafael Group	Carmel Formation		240	gypsum
	San Rafael Group	Page Sandstone		30-70	J-2 unconformity
	Glen Canyon Group	Navajo Sandstone		500-600	rounded cliffs
	Glen Canyon Group	Kayenta Fm		300	ragged tree-covered ledges
	Glen Canyon Group	Wingate Ss		300-350	vertical cliffs
TRIASSIC	Chinle Fm	Church Rock Mbr	Upper	150	J-0 unconformity varicolored
	Chinle Fm	Church Rock Mbr	Black ledge	40	
	Chinle Fm	Church Rock Mbr	Lower	70	
	Chinle Fm	Moss Back Mbr		90	uranium
	Chinle Fm	Temple Mtn Mbr		40	Tr-3 unconformity
	Moenkopi Fm	Moody Canyon Mbr		120-170	
	Moenkopi Fm	Torry Member		260-250	
	Moenkopi Fm	Sinbad Ls Mbr		30-50	snails & pelecypods
	Moenkopi Fm	Black Dragon M		80-120	
PERMIAN	Black Box Dolomite			0-200	
	Cutler Group	White Rim Sandstone		200-400	
	Cutler Group	Organ Rock Shale		100-200	
	Cutler Group	Cedar Mesa Sandstone (arkosic interbeds)		0-900	
	Cutler Group	Elephant Canyon Formation		700	arkosic interbeds
PENNSYLVANIAN	Hermosa Group	Honaker Trail Formation		900	REGIONAL UNCONFORMITY HERMOSA GROUP thickens eastward towards Paradox Basin
	Hermosa Group	Paradox Formation		700-1000	salt & gypsum thin to absent over Nequoia Arch west of Canyonlands
	Hermosa Group	Pinkerton Trail Formation		500	
	Molas Formation			0-100	red residual deposit
MISS	Redwall Limestone			900	cherty
D	Elbert & Ouray Fms			200	
CAMBRIAN	"Lynch" Dolomite and "Maxfield" Limestone undivided			900	
	Ophir Formation			200	
	Tintic Quartzite			180	
pC	Metamorphic rocks			-	

Chart
88 ANTIMONY - JOHNS VALLEY

				FEET	
Q	Alluvium & surficial deposits			0-200	
P	Sevier River Formation			0-200	
MIO	*Osiris Tuff			30	23 m.y. *Distinctive ash-flow tuff bed from a distant source
OLIGOCENE	Mount Dutton Formation mostly dacitic volcanic mudflow breccia, minor ss, cg, flows, and flow breccia			1500-2500	
	Kingston Can, Tuff M			30	26 m.y.
	*Three Creeks Tuff M			100	27 m.y. - Member of Bullion Canyon Volcanics
	*Wah Wah Sp Fm, NRGp			130	29.5 m.y
PALEO	Flagstaff Fm	Claron Fm	White m	up to 1100	Antimony ore host
	Flagstaff Fm	Claron Fm	Red mbr	up to 1100	
CRET	Kaiparowits Formation			0-50	ANGULAR UNCONFORMITY Flagstaff-Claron lies across all listed Cretaceous units here
	Wahweap Formation			0-500	
	Straight Cliffs Formation			0-1200	
	Tropic Formation			0-600	
	Dakota Sandstone			0-200	Dakota coal in Johns Valley
JURASSIC	Carmel Formation			560 plus	Overlain by Flagstaff at Antimony Canyon
	Navajo Sandstone (undivided Glen Canyon Group)			1650 plus	
TRIASSIC	Chinle Formation			120 plus	fault bounded
	Moenkopi Formation			1000 ? not exposed	Tenneco Oil Antimony Canyon # 1 30-30S0-2W 1966
PERMIAN	Plympton Formation			120	
	Kaibab Limestone			130	
	Toroweap Formation			120	
	Queantoweap Sandstone			600	Cedar Mesa equivalent
	Pakoon Formation			670	70 ft red siltstone
P	Callville Limestone			130	
MISS	Deseret Limestone and Gardison Limestone undivided			1100	Redwall of well logs
DEV	Pinyon Peak Limestone			220	
	Cove Ft Qtzt Mbr			20	
	Guilmette Formation			200	
CAMBRIAN	Dolomite & limestone undivided			1800	
	Bright Angel Shale			550	
	Tapeats Quartzite			150 plus	

Chart 89

MARYSVALE AREA

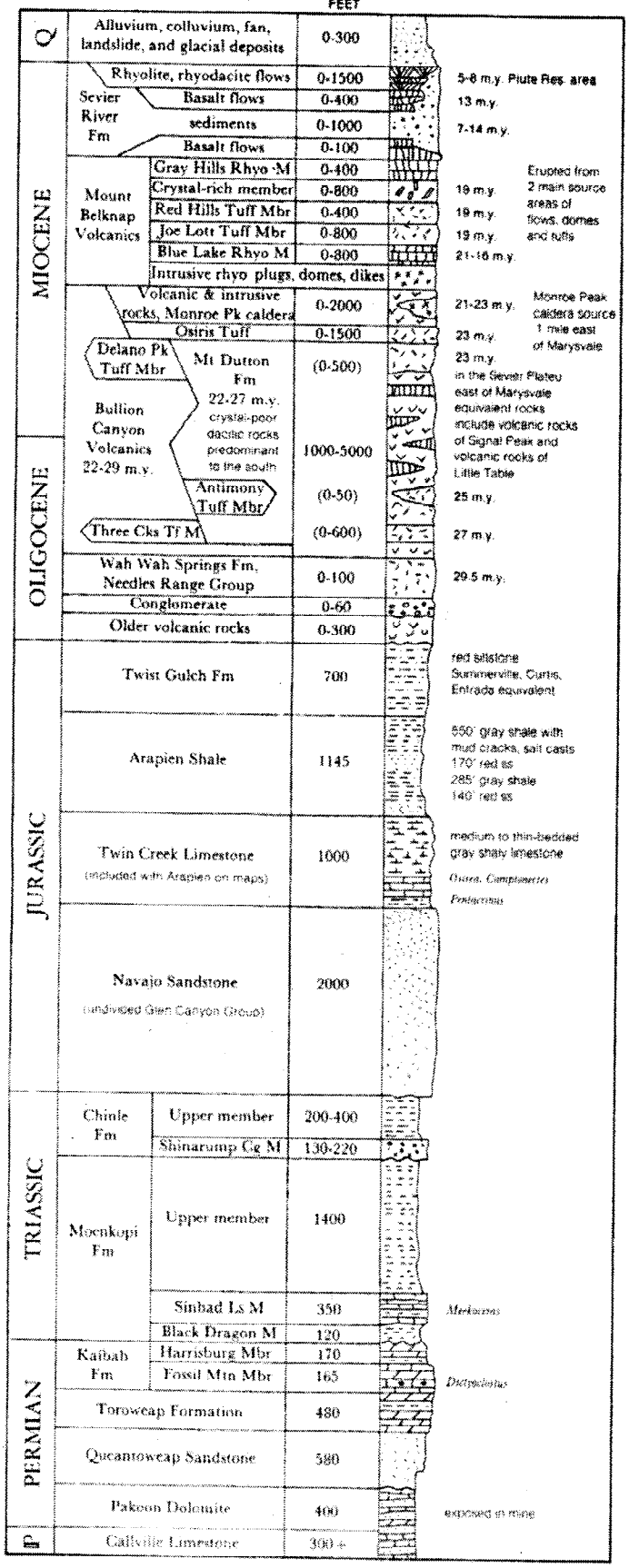
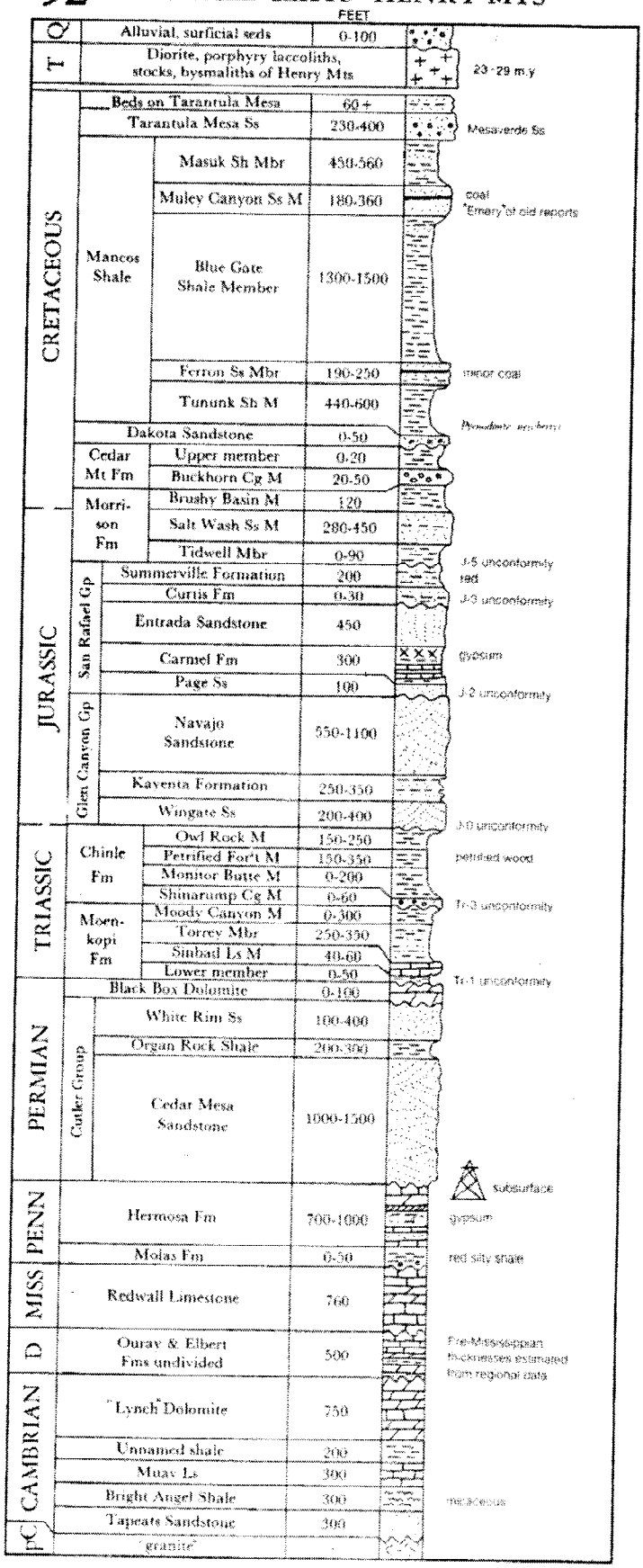


Chart 92

CIRCLE CLIFFS - HENRY MTS